

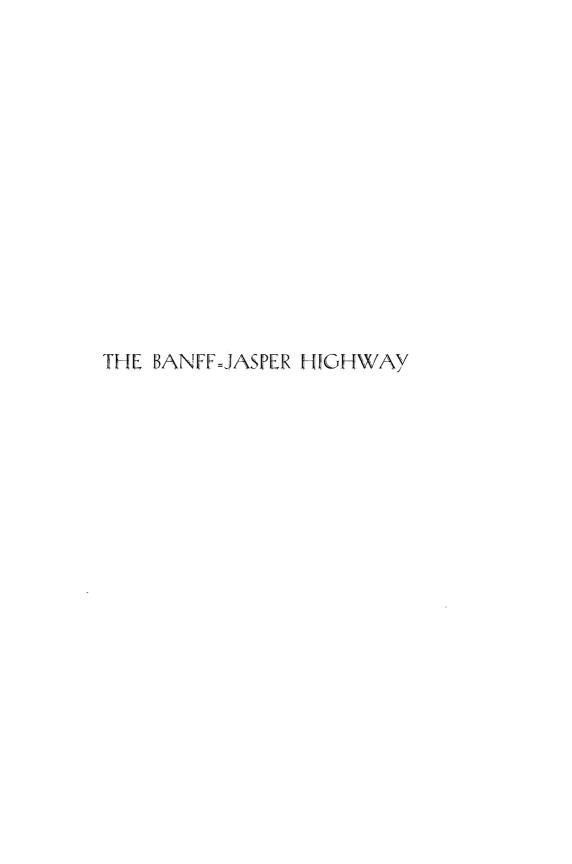
THE BANFF-JASPER HIGHWAY

M. B. WILLIAMS



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DESCRIPTIVE GUIDE

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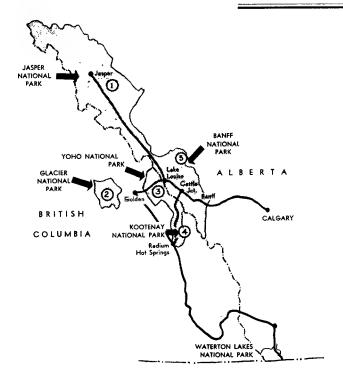
"There is told in the Northwest the story of an old prospector of whom, returning after many years, it was asked what he had to show as the equivalent of so much lost time; and he answered only, 'I have seen the Rocky Mountains'."—From "The Glittering Mountains" by J. Monroe Thorncton.

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Main Routes To The National Parks In Alberta and British Columbia



LEGEND---

- 1. JASPER NATIONAL HIGHWAY.
- 2. GLACIER NATIONAL PARK.
- 3. YOHO NATIONAL PARK.
- 4. KOOTENAY NATIONAL PARK.
- 5. BANFF NATIONAL PARK.





Bow Lake

The Banff-Jasper Highway

"In the days of the Caesars out from the Forum at Rome proceeded the great highways, north, south, east, west, to the centre of every province of the Empire, making each market town of Persia, Spain, and Britain, pervious to the soldiers of the Capitol. So out of the human heart go, as it were, highways to every object in Nature, to reduce it under the dominion of man."—EMERSON.

HAT comparatively simple invention—the internal combustion engine—what has it not brought about in fifty years! An era of road building which would have astonished even the Romans; gifts to men foreshadowed long ago in prophetic dreams and ancient fairy-tales. That

old race dream of the magical seven-leagued boots, the "shoes of swiftness", with which a man could stride over hill and dale without effort or fatigue has been realized in the modern motor car, while even the powers of that remarkable animal, "the cow that jumped over the moon", may—if we are to believe our aeronautical engineers—yet be equalled by the aeroplane.

With this new instrument at his command the nomadic instinct—deeply buried in every man—has found a new, joyous, almost universal expression. "For to behold and for to see", that has always been a sufficient lure to travel, especially to see the wonder and beauty of the world, and today a man has but to step into a motor car and the continent is his. East, west, north, south, the roads beckon into remote, strange, and beautiful places, and a man who commands even a humble jalopy may make a "golden journey" to many fabulous regions once within the reach of only a favoured few.

Among those famed for their romantic beauty few can surpass the Canadian Rockies. Yet sixty years ago little but their name was known. The building of the two transcontinental railways—both remarkable engineering achievements —flung steel highways across them from east to west. From the windows of passing trains, or in the immediate environment of a few stopping places that soon became famous, thousands were then able to see a little of the beauty and grandeur of these great ranges. A few, fortunate enough to possess sufficient time, money, and energy, could fit out expeditions and follow the dim trails left by Indian hunters and early explorers or cut new ways through the tangled snarl of peak, forest, and valley which stretched for 600 miles from east to west and nearly 1000 from north to south. "The New Switzerland", travellers familiar with the Swiss Alps called it. Then, as its vast extent began to be realized, "Fifty Switzerlands in One". In 1911, the Canadian Government determined to reserve all the finest sections forever unspoiled and set aside

practically all that was best in the central Rockies as National Parks. It created a special branch of the government service to protect and develop them. Almost immediately an active programme of road building was begun and with the building of motor highways the mountains were at last opened to wide and democratic enjoyment.

The first road over the Swiss Alps was built by Hannibal in the days of the Roman Empire, but it is only twenty-five years since the first highway was opened across the Rockies. This was the so-called Banff-Windermere Highway, across the Vermillion Pass to the Columbia Valley, completed in 1923. Other roads soon followed—the extension to Lake Louise; the "Kickinghorse Trail", from Lake Louise over the Divide and across the Yoho National Park to Golden—roads opening the three central parks to through travel from east to west.

But between Banff and Jasper lay the richest section of the whole Rockies, towards which motorists looked with longing There, in a region almost inaccessible, the alpine grandeur of the Canadian mountains, it had long been known, reached a majestic culmination. The fascinating books written by a handful of alpine climbers and scientists who had made the first explorations; later government reports, the stories told by mountain guides and the few travellers who made the three weeks' journey through by pony back were all agreed on one point—this was the climax of the Rocky Mountains system. The greatest aggregation of lofty peaks, they reported, the finest and most extensive ice formations—glaciers, snowpeaks, and icefields in bewildering profusion—were to be found here. Along the whole length of the Great Divide for over a hundred miles there was, in fact, an almost continuous cap of ice, projecting down on both sides in innumerable glaciers, with alpine beauty gradually increasing in intensity until it reached its climax in the neighborhood of the great Columbia Icefield.

The first Commissioner of the National Parks of Canada, Mr. Jas. B. Harkin, had begun to consider the feasibility of a



Bow Glacier

steel-to-steel highway as early as the nineteen twenties and on his instructions National Parks engineers made a number of tentative location surveys. They reported that for a good part of the way a practicable route was available along the floor of the valleys. There were, however, two major engineering problems to be overcome—the ascent of the "Big Hill" to the Sunwapta Pass and the crossing of Wilcox Pass. This was not only one of the loftiest passes in the mountains, with steep ascents on both sides, but owing to its position, it was free from snow during only a few weeks in the year.

When construction began in 1931 both these problems had been solved. The first was overcome by long spiral rock cuttings which wind upwards, back and forth across the Big Hill with such easy gradients that the motorist is scarcely conscious of the steepness of the ascent; the second, by blasting

a way over the west shoulder of Mt. Wilcox at a lower level. As finally completed the road offers no difficulty to a careful driver and it goes without saying that every intelligent driver uses care on a mountain road.

Construction began during the depression of the early thirties, partly as a relief measure for the unemployed. The healthful, outdoor life, adequate food and a shelter, attracted a number of men, some of them young college graduates who could find no other employment, and though appropriations were limited, the work was slowly pushed through. By the end of 1939 the road was completed. On July 1st in the following year, without official formalities, it was declared open. Canada was then at war and tourist travel was at a minimum. Not until peace was declared and the gasoline restrictions were lifted did the tide of visitors begin.

For the first thirty-six miles the Banff-Jasper Highway follows the existing link of the Trans-Canada Highway along the Bow Valley from Banff to Lake Louise station. Here it turns north, still following the Bow River, rising by a long easy climb of 26.5 miles to Bow Pass (6,785 ft.), which marks the watershed between the waters flowing south to the Bow and north to the North Saskatchewan. From Bow Pass the road drops down to the remarkable Intramontane Trench, one of the striking geographical features of the region, which lies like a long cradle, roughly parallel with the Divide from Bow Pass to Jasper. In places the continental watershed is less than four miles away, in others as much as thirty miles, for the Great Divide is highly erratic and resembles a crooked hairpin much more than a straight line.

For nearly one hundred and fifty miles civilization is left behind. The only thread tied to the outside world is the thin line of the Forest Protection Service telephone, strung from jackpine to jackpine along the way. A few gas pumps, one service garage, two comfortable "Chalets" and several Bungalow Camps provide for the needs and accommodation of travellers.



Road Construction Camp

Beyond, on either side of the road, stretches the mountain wilderness practically untouched as when the first white man came.

Accompanying the road from Bow Pass to Jasper go four rivers, rivers with musical Indian names that linger in the memory—Mistaya, Saskatchewan, Sunwapta, and Athabaska—each of them occupying in succession the deep cradle of the Intramontane Trench and each born from

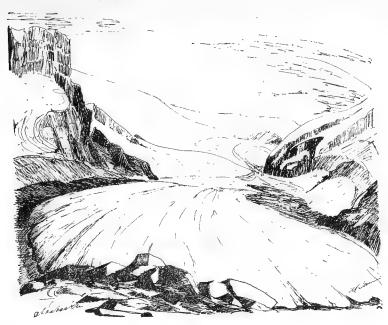
the snows of the Great Divide. The road passes within walking distance of the birthplace of the three first and one can follow their course from the moment when the infant stream dribbles from the tongue of its parent glacier till it sweeps out through a transverse valley towards the plains. The pattern in each case is the same—at first an insignificant rivulet, trickling from glaciers which hang like huge icicles from the very eaves of the continent, but soon, gathering strength, taking in tributaries, becoming a wild ice-green torrent which goes rushing down the valley, dashing over rocky ledges, clawing wildly at boulders, unloosening them, bearing them along, until heavy with the rock dust it has gathered, it slows down and widens out into a filagree of sluggish channels as if to recover its strength before it sweeps on again. Each stream cuts its way through one or more dark canyons, with walls sometimes two or three hundred feet in depth and only a few wide, where the compressed water, cribbed, cabined and confined, lashes itself into fury, and in the course of centuries has carved out strange caverns and grottoes in the stubborn rock.

From Bow Pass onwards the road runs between two lines of

towering mountains, many of them over 11,000 feet in height, a veritable "Avenue of Giants". North of Bow Pass the average height of the Rockies increases and in the region centred by the Columbia Icefield seventy percent of the loftiest peaks of the system are found. Although Mt. Robson (12,972 ft.), sixty miles to the north, is the highest point in the Canadian mountains south of the Arctic, it occupies an isolated position. It represents a great tower in front of the main building. The vast sea of ice known as the Columbia Icefield is the true dome of the "roof of the Rockies". A crystal dome, two thousand feet or more thick, made from the snow accumulations of countless centuries, lifted above the clouds upon the rocky shoulders of a score of glorious peaks! Springing down from it on all sides curve the glistening arches of great glaciers—the largest fifteen miles long and over two wide-transformed as they reach the valleys into streams which become the headwaters of rivers flowing to three oceans—the Athabaska to the Arctic, the Saskatchewan to the North Atlantic, and on the western side via Bush River and Tsar Creek to the mighty Columbia and so to the Pacific.

The highway leads to the very foot of the Athabaska Glacier, second largest of the great ice tentacles which project from the Columbia Icefield, and the source of the "Mistahay-Shakaw-Seepee", or Great River of the Woods, as the Indians called the Athabaska. The great ice sea, larger than the two largest in Switzerland—the Ewige Schneefeld and the Aletsch Glacier—combined, extends like a wide frozen plain three thousand feet above, and can be reached without difficulty on pony-back. This vast icefield, covering, with its attendant glaciers, 150 square miles, is the largest remnant south of the Arctic of the great ice sheets which once covered the whole northern half of this continent. The field lies far above timber line, so high up that not even the hardiest plants can brave the eternal cold, and this wide frozen expanse which has survived the heat of forty thousand summers strangely stirs the imagination.

But though the Columbia is the largest, it is by no means



Athabaska Glacier

the only icefield along the way. From the Kickinghorse Pass northwards the skyline is white with ice, snowfields and glaciers succeeding one another and merging into one another for almost a hundred miles. In places this ice cap which crowns the Divide is clearly visible, glittering green-white against the intense blue sky. It is the sudden glimpses of these snowy wastes, the thrilling purity of glaciers shining against dark precipice or green forest, and the serene grandeur of white summits towering up into the clouds, which make the journey through the heart of the Canadian Rockies so exciting. Every mile brings a new picture, a new arrangement of line, mass, and color to delight the eye and heart. Perhaps nowhere else in the world can one see so many miles of continuous ice. The Waputik and Wapta Icefields are within a day's ride from Bow Lake. The Freshfield Icefield and the splendid group of peaks which surround it can be reached by trail up the Howse River. The Mons and Lyell fields lie farther north. The first can

be reached by the trail up Forbes Brook, a tributary of the Howse, to Bush Pass. The Lyell Icefield, with its fine glaciers, dominated by five-peaked Mt. Lyell (11,495 ft.), which was discovered by Hector forty years before the Columbia, supplies the headwaters of both Arctomys Creek and the Alexandra River, two important tributaries of the North Saskatchewan. Although all these icefields have been mapped they are but little known and they offer rich opportunities for exploration both to the alpine climber and the lover of great mountain scenery.



Moraine Lake, Valley of the Ten Peaks

Four National Parks In One

The Banff-Jasper Highway is the last link in an extensive system of National Park Highways which now ties together the Banff, Yoho, Kootenay, and Jasper National Parks and makes them into what is virtually one vast mountain playground.

HILE the boundaries of these reservations are not contiguous throughout, a glance at the map will show how they fit together. On the east slope the Banff Park extends from the foothills to the Great Divide and about thirty miles to the north and south of the Canadian Pacific Railway, covering an area of 2,585 square miles. west slope of the Rockies the Yoho and Kootenay Parks, in British Columbia, adjoin the Banff Park at the Divide and also touch each other, adding nearly 1,200 square miles more. Jasper Park extends about thirty miles north of the Canadian National Railway lines and approximately 65 miles south of it, covering 4,200 square miles. Though each park is administered separately, the motorist is scarcely conscious when he passes from one to the other. By whichever gate he enters he has before him nearly 8,000 square miles of National Park territory. A region as large as some European kingdoms; almost twice the mountainous area of Switzerland! it set aside in the name of the people "in perpetuity", as the Act establishing it decrees, and maintained "for the benefit. use, and enjoyment".



CANADA'S NATIONAL PARKS SYSTEM

Canada's first National Park was an area of ten square miles set in the vicinity of the Hot Springs at Banff. Who was the original discoverer of the now famous waters is not known. Legend says they were first used by an old and rheumatic grizzly who had discovered that a bath in these warm waters soothed his aching bones. A trapper, who later claimed compensation rights, declared that he had found bear tracks on Sulphur Mountain and following them up had come upon the old bear soaking himself in the pool. It is probable that the Indians had known of the existence of the springs for years, but as usual they ascribed their peculiar behaviour, as they did everything they could not understand, to evil spirits, and regarded the spot as a place which it was wise to avoid.

It was not until engineering parties, laying out the line for the Canadian Pacific Railway, came up the Bow Valley in 1883, that the existence of these springs became known to the outside world. From their camp in the valley they noted a persistent column of steam on the opposite side of the river. They decided to investigate it and hastily constructing a raft went across. As they came near they saw that the steam was rising from a hole about as wide as a man's body, twenty feet or so up. Peering down they could hear water gurgling in the steaming darkness below. A felled tree served for ladder and, descending, they found themselves in a small cave evidently hollowed out by the hot subterranean waters, which had first blown out an opening in the top of the cave, but later, had forced a lateral way along a crack in the strata to another pool outside. The high temperature of the waters showed that this was one of the hottest springs yet discovered in Canada and the C. P. R. men at once made an official report of their find.

As the railway neared completion the government received numerous applications for the right to develop the springs and a surprising number of claimants as original discoverers appeared. Indeed, everyone but the old grizzly appeared to be demanding compensation. Faced with so many claimants the government decided to operate the springs themselves. The Hot Springs of Arkansas were then at the height of their popularity and "spas" were the fashion. In 1885 the last spike was driven in the railway line at Craigellachie in the Selkirk mountains and the great engineering feat was completed. The more-than-Chinese-wall of the mountains, which had so long divided Canada, had been conquered and Canada became in reality what she had hitherto been in name only, "a Dominion from sea to sea."

As guests of the railway in the first train over the new line went a large number of members of parliament and senators. They came back with imaginations stirred by the beauty and wonder of the mountains and with a new conception of the greatness of their own land. When, in the following session, a bill was brought down to create a national park at Banff, it was warmly supported by both sides of the House.

Since the railway then did not carry dining cars the C. P. R. built comfortable inns at several points—Lake Louise, Field, and Glacier—and the government reserved small areas in their immediate neighborhood to preserve the environment, which were called park reserves. Having done this much the government promptly forgot all about them. The only park with a real organization was the soon enlarged Banff Park. Here an energetic local superintendent, Mr. Howard Douglas, managed to secure small appropriations and did what he could to improve the fast-growing town of Banff. At Ottawa the reserves were passed about like orphans from one administrative office to another, and got a scanty share of government appropriations.

Following the historic Conference on the Conservation of

Natural Resources called at Washington by Theodore Roosevelt in 1907, to which Canada sent her energtic Minister of the Interior, the Hon. Clifford Sifton, a vigorous policy for the preservation and development of all the natural resources of Canada was undertaken. At this conference the surprising theory that the natural beauty of a country should be included among its sources of wealth was put forth for the first time, and the great principle laid down that places of outstanding beauty and interest belonged by right to the whole people. Animated by the new gospel the U. S. A. has set aside a number of reservations for the preservation of natural wonders. Canada had no geysers or volcanoes, but in her western mountains she possessed a region as glorious as that which had made Switzerland for a century the playground of the world.

In 1911 the Dominion House passed a bill establishing all the reserves which had been set aside as National Parks and providing for their administration under a special branch of government, to be presided over by an officer who was to be known as the Commissioner of Dominion (afterwards National) Parks.

Mr. Jas. B. Harkin was given the post. He was young, energetic, enthusiastic, imaginative and dowered not only with a practical idealism but with a rare capacity for disinterested service. To this unusual combination of abilities the active development which took place during his twenty-five years in office is largely due. In one of his early reports he set forth his belief in the value of these great reservations of the beauty of Nature, a creed which underlay all his future work. He wrote:

"National Parks are maintained for all the people for the ill that they may be restored; for the well that they may be fortified and inspired by the sunshine, the fresh air, the beauty, and all the other healing, ennobling agencies of Nature. They exist in order that every citizen of Canada may satisfy his craving for Nature and Nature's

beauty; that he may absorb the poise and restfulness of the forests; that he may fill his soul with the brillance of the wild flowers and the sublimity of the mountain peaks; that he may develop the buoyancy, the joy, and the activity that he sees in the wild animals; that he may stock his brain and mind with great thoughts, noble ideals; that he may be made better, be healthier, and happier."

The total areas of the seven reservations which were then designated "National Parks", including two buffalo reserves. was a little over 7,000 square miles. Today there are 22 National Parks in Canada, one or more in every province of the Dominion, with a total area of over 16,000 square miles. The Parks Branch also has charge of the conservation of nearly extinct animals such as buffalo, elk, antelope and muskox, the preservation of migratory birds, and the marking and preservation of historic and pre-historic sites.

The title to all land in the National Parks remains vested in the Crown, but leases are granted for long periods for business or residential purposes. Building is controlled and all plans for new construction must be passed by the Architectural Division. Streets, sidewalks, water, sewer, and electric lighting facilities, and all other municipal services are maintained by the government, as well as most recreational facilities such as golf links, recreational grounds, public baths and bathing pools, museums, motor campsites, etc., together with an active fire and forest protection service. Hundreds of miles of roads and nearly two thousand miles of trails have also been built, opening these beautiful regions each year to ever wider use by the public.

Within these wide boundaries man's ancient birthright in the beauty and wonder and solitariness of the earth are given back to him. Everywhere else the loveliness and dignity of the landscape may be vulgarized, spoiled by commercialism, lost in cities, or snatched away and fenced in by the privileged few. But here, in his name, for his enjoyment, and usually with his

CANADA'S NATIONAL PARKS SYSTEM

co-operation, they are revered, protected, and preserved. He may travel for hundreds of miles and know that no billboard will lift its ugly head; no factory discharge its refuse into crystal lake or stream. One permit allows him to travel through the four great parks of the central Rockies with fishing privileges as well, and in each he will find many provisions for his comfort, convenience, protection, and recreation.

Government motor camps, equipped with free kitchen shelters, campstoves, fuel and running water are to be found along all park highways. Tent camping permits cost one dollar for each two-week period. There is a fee of two dollars for automobile cabin trailers for each two-week period or fraction thereof. Full information with regard to the park regulations. campsites and other accommodation, as well as maps and folders, may be obtained in each park upon application at the Administration Office. In Banff there is a special Information Bureau located in the Museum at the north end of the Bow Bridge. At Jasper the Information Bureau is in the Administration Office Building, near the C.N. Railway Station.



How to Reach the Highway . . .



Sinclair Canyon

The Banff-Jasper Highway may be approached through four gateways. On the east by the Trans-Canada Highway from Calgary, entering the Banff National Park 11 miles east of Banff. From Calgary a provincial road runs south to the International Boundary via the Waterton Lakes National Park in Southern Alberta and via the Big Chief Highway to the U.S. Glacier National Park, Mont., which adjoins the Canadian reservation at the International Boundary.

On the north a Provincial Highway leads west from Edmonton to the east gate of Jasper Park, 204 miles, and thence across that park for 34 miles to Jasper, where it connects with the Banff-Jasper Highway.

Visitors approaching via Spokane may cross the International Boundary at Kingsgate and travel via Cranbrook and Kimberley to Radium Hot Springs, B. C. Here the Banff-Windermere Highway is taken via Sinclair Canyon and across the Kootenay National Park, crossing the Great Divide by way of the Vermilion Pass. From this point the road descends for 11 miles to meet the Banff-Jasper Highway at Johnston Canyon, 16 miles west of Banff.

The all-Canada route from Vancouver follows the Trans-Canada Highway via the Fraser Canyon and thence via Kamloops, Revelstoke and the Big Bend Highway to Golden, B. C. Here it meets the Kickinghorse Trail and traverses the Yoho National Park, crossing the Divide by the Kickinghorse Pass. Five miles east it reaches the Lake Louise junction where the Banff-Jasper Highway turns off to the north.

Another approach from the Western United States is via Spokane, Wash., to Trail or Nelson, B. C., and thence up the beautiful Arrow Lakes by C. P. R. steamship to Revelstoke, where connection is made with the Big Bend Highway to Golden and via Yoho Park to Field, Lake Louise and the Banff-Jasper road.



The Building of the Mountains

"How strangely the world has been built, bed after bed of limestone, or slate, or quartzite, pale grey or pale green, or dark red or purple; built into cathedrals or castles, or crumpled like colored cloths from the rag-bag, squeezed together into arches and troughs, into V's, and S's, and M's ten miles long and two miles high; or else sheets of rock twenty thousand feet thick have been sliced into blocks and tilted up to play leapfrog with one another."—A. P. Coleman in "The Canadian Rockies".

T took man, delayed by the conflagration in Europe, eight or nine years to build the highway from Banff to Jasper, but Nature had been at work fashioning the landscape through which it passes for over half a billion years. The Rockies, as mountains go, are young mountains. Their height, their great domes, cliffs, pinnacles and towers reveal that they have only recently come of age. Yet they are made up, the geologists tell us, of some of the oldest rocks in the world. Travelling along this highway one can, in fact, given the clue, read most of the chapters in the earth's long history, going back to those unthinkably far-off Pre-Cambrian

days before life of any kind crawled, or swam, or flew upon the earth. In most parts of the world these early formations lie deeply buried under later deposits, but here the very "foundations of the world" are literally exposed to view.

The complete story can only be told by the geologist, but a simple outline helps one to understand and enjoy more what one sees travelling along. Half a billion years ago the continent as we know it presented a very different picture. On its western border, reaching out into what is now the Pacific Ocean, stood an old land mass called Cascadia, made up of high mountain ranges. To the east of it, from the Gulf of California to the Arctic, rolled a shallow inland sea which covered most of the area now occupied by the Rockies. Through long millions of years wind, rain and frost wore down the land to the west and the rocky sediments were carried down to the floor of this inland sea and there laid in layer upon layer until a depth of thousands of feet had been formed. As the weight upon it increased, the bed of the sea sank beneath it, pressing the remains of plant and animal life between the leaves.

As the sediments reached the water, the heavier particles, made up of small stones and gravel, were dropped at once near the shore. The sand was dropped next, the fine rock flour beyond. Out in the shallow waters at the verge of the sediments swam millions of tiny sea creatures, life's first experiments. From the lime, always held in solution in water, they formed their minute palaces of pearl. For thousands of years they lived their countless lives and died, depositing their shells in the limy ooze of the sea's bed. Under the pressure of the increasing weight upon them the gravels hardened into conglomerates, the sand into sandstones, the mud into shales, while the limy ooze and crumbled shells became the pearly gray limestones of which a great part of the Rockies are made.

The earth's life was seldom a peaceful one for long. "Violent tremors shook her frame from time to time and her breast

THE BUILDING OF THE MOUNTAINS . . .

heaved and fell, shaking off the waters, but always the sea returned." In one of these disturbances the Selkirks and Purcell Ranges west of the Rockies were lifted up and the great trough now occupied by the Kootenay and Columbia rivers appeared. The summits of these ranges were in turn worn down, and several thousand feet more laid on the floor of the narrowing sea.

Then near the close of the Cretaceous era—that strange age made graphic by Walt Disney in "Fantasia" -- when the dinosaurs, the mastodons, the icthyosaurus, and the terrible tyrannosaurus lived and fought in steamy woods, occurred what the geologist calls the Laramide Revolution, a great thrust from the west which pushed up the crust of the earth into long folds such as one can make in a tablecloth by pushing it from the side to the centre. The old sea bottom of the Cordilleran Trough, with its beds of limestones, shales, and sandstones. was lifted thousands of feet in the air. When the folds broke under the strain they were shoved out eastward over existing formations. In the eastern ranges of Jasper Park one can see very clearly how the rocks were thrust out over the then edge of the plains, and folded completely over like waves breaking upon a beach. Along the Great Divide for the most part the strata were lifted up almost straight in the air, then broken apart by various agencies into the great block-like structures which succeed one another in infinite variety throughout the whole length of the highway from Lake Louise to Jasper.

Through the long ages which followed, while Nature was developing her plant life, and trees now familiar—the poplar, the birch, the maple, the oak, the walnut, the fig, and the magnolia—appeared, wind, frost and rain were carving and chiselling the peaks. In another great disturbance the Rockies were lifted higher, the breaks across the folds deepened and increased, and great transverse valleys such as that now occupied by the Bow, the North Saskatchewan, and the Athabaska from Jasper east appeared.

THE BANFF - JASPER HIGHWAY .



Mt. Rundle, a Typical Writing Desk Mountain

After this uplift of the Rockies the climate grew colder and drier. Little by little the summers grew shorter, the winters longer, the snow and ice accumulations deeper. The animals and birds were driven ever farther south. Green living things disappeared before the slow advance of the cold. It was the beginning of the first Ice Age.

What happened in the mountains? Dr. Coleman in his Last Million Years gives us the graphic picture. "Let us imagine," he says, "that all the hundreds of mountain glaciers in the Rockies and Selkirks were to enlarge at once and blend their swollen ends, the valleys become choked with ice hundreds or thousands of feet thick, with no outlet except the far-off openings of the great longitudinal valleys to the southeast and northwest. At length, after thousands of years, a Cordilleran ice-cap is built up, flooding all the lower ground, so that lake basins, river flats, and canyons, and even tablelands and the lower mountains disappear under a sheet of white, only the higher peaks rising island-like with cliffs of rock above a vast plateau of snow."

THE BUILDING OF THE MOUNTAINS

Of the three centres from which the ice spread the Cordilleran, which had its gathering ground between latitude 55 and 59, was, it is believed, the first to form, and in the Columbia Icefield today, and the smaller fields along the Divide, enough still remains to give an idea of what the mountain world and, indeed, the whole northern half of the continent looked like during the four invasions of the ice.

To the work of those slow, irresistible, moving masses of ice, operating through thousands of years, we owe much of the beauty of the mountain landscape today. They deepened and widened the valleys; cracked, scraped, and split the peaks, carving them into pyramids, towers and pinnacles; changed the course of rivers, and scooped out the bowl-like basins or "cirques" in which so many lovely little lakes now lie. There



Mt. Eisenhower

is scarcely a peak along the western side of the highway which does not display one or more of these old nests of hanging glaciers, many of them still filled with ice.

Among older mountains the dramatic contest between the forces which destroy and upbuild is practically over. Their once lofty summits have been rubbed down into rounded hills. But the Rockies are still unconquered. They lift naked torsoes and splendid heads like gladiators stripped for the battle. The avalanche thunders about their heights, tons of rock and snow are flung daily to the valleys, streams gouge and tear at their foundations, but it will be many ages before they are subdued.



Native Tribes

The red aborigines!

Leaving natural breaths, sounds of rain and winds,

Calls as of birds and animals in the woods,

Syllabled to us for names!



HE earliest pathfinders in the Rockies were those first inhabitants of America whom we still, so erroneously, call "Indians". For centuries before the white man came they had roamed the western plains, following the buffalo, who provided them not only with the glorious excitements of the chase, but practically everything they needed for existence as well. The war-like Blackfeet were the first plain dwellers to obtain firearms from the white men and with these they drove their ancient enemies, the Assiniboines, or "Stonies", farther and farther west, until finally the Stonies were forced into the first defiles of the mountains in search of shelter and game. Here they found new sources of food, for Bighorn sheep, Rocky Mountain goat, moose, deer, and elk, roamed in abundance.

By the time the first fur traders came the Indians had explored the main valleys leading into the Central Rockies and it seems likely that they already knew and had travelled over most of the main passes of the Continental Divide. When the first explorers attempted to penetrate the maze of the mountains many of them took natives as guides or followed geographical directions furnished by the Indians, though these were often vague and ambiguous, for the Indian made no maps and counted distances only by "sleeps".

So long as the bow and arrow were the Indian's only weapons

the supply of game in the mountains remained inexhaustible. With the coming of the white man, whose civilization is largely motivated by greed, the picture changed. The rival Fur Companies pressed the natives into their service, furnished them with firearms, tempted them with white man's goods and firewater, and taught them to despise the ancient tribal wisdom which restricted the killing of their brothers, the wild animals, only to their necessities. But while the white man grew rich, the Indian grew ever poorer. In less than a century the game supplies were exhausted, and the Indians themselves, decimated by the white man's diseases and vices, were forced to accept the herded life of the reserve.

The tribes who formerly roamed along the eastern fringe of the mountains belong to three distinct families, speaking totally unrelated languages. The Blackfeet and Crees were Algonquins; the Assiniboines, or Stonies, as they were called from their custom of cooking by dropping red-hot stones into a kettle of water, belonged to the Dakota branch of the Siouan family; while the Sarsi and Beaver tribes belong to the Athabaskan or Dene' stock of the north. Across the Divide, in the south-eastern plateaus of British Columbia, lived the Kootenays —once prairie dwellers, who had been driven across the mountains by the Blackfeet—and the Salish tribe, both of whom were "salmon-eaters". Bands of these five families, now a mere remnant of their former numbers, live on reserves near the mountains, and have retained their native languages, though much of their "rich and sustaining culture" has been The authority of the chiefs, the strict marriage and family traditions, the wise training of children, the severe disciplines of puberty, have largely disappeared, with a consequent physical and psychical deterioration.

Many of the names with which the visitor becomes familiar in the Banff and Jasper Parks are from the Stoney or Cree languages. Minnewanka, Wapta, Waputik, Mistaya, Saskatchewan, Sunwapta, Chaba—what delightful names they are! One wishes there were more of them. Mt. Peechee was named

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in honour of a half-breed who took Sir Geo. Simpson, Governor of the Hudson's Bay Company, across the mountains on his famous journey about the world, and to whom, he says, "he owed much". The Peyto Lake and Glacier and peak commemorate Collie's intelligent guide. Tekarra was the name of the Indian guide who led Hector's party to the Athabaska Pass, while Adolphus Lake was called after Adolphus Moberley, who was, says Dr. Coleman, "the most efficient savage I ever knew".

The Indian's deep and poetical feeling for Nature lingers in many legends and myths. To him all Nature was alive. Spirit voices spoke to him from the wind and the forest, in the calls of wild animals and birds. Manitous, ghosts, and snam were all about. It was the part of wisdom, therefore, to walk carefully, to listen to their admonitions, to observe strictly the tribal taboos. The dividing line between the animal and human appeared very thin, so thin that the Indian



The Home of the Winds (25)

made little distinction between the two. Spirits, he believed, could take on either form at will and appear now as one, now as the other.

At puberty it was the custom for the youths of the tribe to undergo prolonged solitary vigils and fasting in some lonely or dangerous place. At the end of two or three days' fast his snam or guardian spirit would appear to the youth in a dream or vision, usually taking the form of some animal who was henceforth looked upon as his protector through life.

In his delightful book, "Indian Days in the Rockies", Dr. Marius Barbeau, Dominion Anthropologist, quotes the words of an old Kootenay Indian who had clung to the ancient wisdom:

"One who has no 'Snam' gets no help in time of need, in time of danger. Without guardian spirits an Indian is like a fish without fins. He cannot live very long, he is nothing but a fool. For it is through them that we really know the sun, the moon, the mountains, the dawn and the night; it is from them we get the strength of the earth, of all Nature."

Tetlaneetsa, an old Indian, gave him this deeply poetical account of his own experience:

"At fifteen years of age I was up in the hills undergoing training, all alone, all alone.

"One summer night I slept in an open field in the grass, near a patch of fireweeds. A great wind rose at dawn and I heard a voice, a sweet voice, floating above, back and forth, with the tufts of cotton from the fireweed stalks.

"Now I understood the words of my old god-father, 'When you wake up at daybreak you will hear the voice of the wind, the song of all Nature. Listen to it, son, for it is a lesson to you'. And I listened to the wind, the strong wind from the valleys below. It was the voice that

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makes all Nature sing—the rivers, the canyons, the mountain gorges, the forests. I could hear them all singing in the wind. Their song was beautiful, endless, dream-like . . . I learnt the tune and began to hum it to myself. I picked up my hat and used it as a drum. It was impossible to sit still, for the song floated in the air, and everyone must dance when the trees and grass and the brush dance in the wind".

A song such as this became a personal possession of the highest value. In all times of trouble, of danger, or sickness, the Indian sang it, and he believed it brought him supernatural aid, health and strength.

In former days the most important festival of the plains Indians was the Sun Dance, held at one time by the Stonies among other places at the Sun Dance Canyon, 4 miles from Banff. This is said to have been primarily a dance rite devoted to the worship of the Thunderbird or Rainmaker, and only secondarily to that of the sun and lesser gods. According to Miss Paget it was "a thank-offering to the



Sweat Bath and Buffalo Skull Used in Snow

Great Spirit for the re-awakening of all Nature after the silence of winter". It was, she says, "a time for the making of braves, or, rather, an opportunity for the test of courage and endurance; it was a time for petitions through their dream guardians for future blessings".

The circular lodge in which the dance was held was the lodge of the Thunder. It was a rustic structure, built with traditional ceremony from young trees freshly cut in the forest. In the centre stood a votive pole, erected only by chaste youths, upon which offerings were hung as gifts to the Thunderbird and about which the people danced. The main feature of the ceremony was the prolonged dancing of the young men and women, who, with little food and no water, taxed their endur-

ance to the utmost. Some tribes called it the "denying-oneself-water" dance. Its object appears to have been to bring rain, and to induce visions of spirit helpers who would give to the votaries health, success in battle, long life, or good hunting. Among some tribes the dancers would look steadily at the sun and pray to it for strength to complete the dance, a custom which may account for the name. Those who endured to the end won high esteem as true "braves".

The old beliefs among the Canadian Indians are fast passing away, if they have not already gone. They could not survive in the face of a more powerful and materialistic civilization. Many Indians are now well acquainted with modern science. A few have taken honored places among the professions. Scores served with the Allied forces over seas. While many still lack proper education and have scarcely begun the difficult passage from one culture to another, others have successfully accomplished it. Within the last few years a new spirit has awakened among the Indians. They are pressing their claims to be accepted as full citizens of the Dominion, demanding equal educational opportunities, claims which in the name of justice must soon be heard and acceded to.



Indian Teepee

Pathfinders

Down the edges, through the passes, up the mountain steep, Conquering, holding, daring, venturing,

Pioneers! O Pioneers!

WALT WHITMAN.



Ship, 18th Century

VERYONE who travels through the Canadian mountains by highway or railway, or over them by airway, must find himself marvelling at the skill and daring of those who found the first ways through. For four hundred miles from the Prairies to the verge of the Pacific and north to the Arctic stretch the Canadian Cordillera, made up of successive belts, each of which contains its own complicated system of peaks. It has taken a century and a half to unravel that complicated pattern and some of it is not completely clear yet.

The most easterly, or Rocky Mountain system, is the longest, widest, and highest. It rises in an abrupt wall of from 6,000 to 7,000 feet at the edge of the Plains. A few transverse valleys offer a way in. Up these, into regions ever wilder, more desolate, more threatening, ventured the first fur traders, missionaries, scientists and explorers, feeling out a path, "down the edges, through the passes, up the mountain steep," wading ice-cold rivers in January, bivouacking in snow, facing savage animals, and sometimes unfriendly natives, the perils of unknown rivers, the heart-breaking tangle of forest and the maddening treachery of muskeg. Names of these early path-finders still reverberate along their old trails, perpetuated in peak, river and mountain lake, and forgotten history comes to life in the names they bestowed on the regions through which they passed.

There are two men who have left their imprint indelibly on the regions traversed by the Banff-Jasper Highway. Earlier in time and more famous was David Thompson, agent of the Fur Traders, who extended their empire across the mountains to the Pacific Ocean and who was mainly responsible for saving what is now British Columbia for the British Crown. At fourteen Thompson came out from England as an indentured clerk to the Hudson's Bay Company, which he served with ability for several years. But Thompson's main urge was not trading, but exploration. The vast unknown territories of the West, the empty spaces on the map, stirred his imagination. Realizing that the older company did not share his enthusiasm, he transferred to the younger and more active Northwest Company, where his efforts to obtain exact knowledge of the country were encouraged, not frowned upon. His subsequent journeys involved over fifty thousand miles of travel, sometimes on horseback, but usually in canoe or on foot. He travelled from the headwaters of the Missouri to the mouth of the Columbia and, says the editor of his Narrative, "with very imperfect instruments, and under extraordinarily difficult conditions, he placed on the map the main routes of travel in one million two hundred thousand square miles of Canada and five hundred thousand of the United States". Though largely self-taught. Thompson worked with the precision of a scientist and his maps are astonishingly accurate, even judged by methods of today.

Thompson came in from the Plains by way of the North Saskatchewan, in June, 1807. With him were his wife and small family and a company of Indians and French voyageurs. They travelled in canoes as far as the mouth of the Howse River and then turned up that stream. In his "Narrative" he writes.

"At noon we left the main stream coming from the N.W. westward and followed a rivulet for about four miles, where it, becoming to shoal, we put the goods on shore and I stayed in care of them; the men and canoes

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immediately went off for the remainder, and by June 10 all was landed. The people returned to live at Kootenaie Plains till I should send for them."

Then, with that eye to the beauty and grandeur of Nature, which he never lost, he adds:

"Among these stupendous and solitary wilds, covered with eternal Snow, and mountain connected to mountain by immense glaciers, the collection of Ages, and on which the Beams of the Sun make hardly any impression, when aided by the most favourable weather, I stayed 14 days more."

Crossing the Howse Pass he found a small rill, "whose current descends to the Pacific Ocean", and wrote:

"May God in his mercy give me to see where its waters flow into the Ocean and return in safety".

Thompson's prayer was answered, but not at once. He reached the Columbia and built three log houses with stockades and bastions near the point where the river leaves Windermere Lake. The Piegans, a tribe of the Blackfeet, who were continually at war with the tribes of the Columbia Valley, resented this strengthening of their enemies' defences, and sent a war party of 300 men against the post. Thompson, who always preferred diplomacy to war, gravely presented the two Piegan messengers who came to declare war with generous gifts of tobacco to take back to their camp. The Piegans had no tobacco, and the gift was a terrible temptation. Yet, to smoke it, meant a declaration of peace. In the end the tobacco won. After many speeches extolling their own bravery, they filled their pipes and the war was temporarily off.

During the next three years Thompson made several trips across the pass to the post on the Columbia and had it not been for the increasing hostility of the Piegans, this would probably have been adopted as the regular route for the Fur Trade. By a strange accident of history the pass does not bear

Thompson's name but that of Joseph Howse, agent of the Hudson's Bay Company at Jasper House, who was sent down in 1807 to see what the rival company were doing, and how far they had gone. The next year Howse crossed the pass and established a temporary post on the Columbia. Alarmed at the hostile attitude of the Piegans, he remained only one year, and the following spring returned, abandoning the trade to the rival company.

In the autumn of 1810 the Piegans attacked Thompson's party on the Saskatchewan, not far from the present Crossing (Mile 86) and the men had to flee for their lives. The fortuitous appearance of three grizzlies, whom the Piegans took to be his supernatural protectors, enabled Thompson to escape, but it was clear that this route had become too dangerous for further travel.

Thompson, however, was not easily blocked. Learning of another pass farther north, he wrote to his Company offering to attempt it. The Northwesters had recently learned that another Fur Company under John Jacob Astor, of New York, was about to begin operations at the mouth of the Columbia, and they were anxious to ensure a division of trade. They, therefore, authorized Thompson at once to proceed.

It was the fifth of January, 1811, when Thompson reached Jasper House on the Athabaska and 26 degrees below zero. Here he got together his provisions and with eight sleds and sixteen dogs, set off. He followed the Athabaska as far as the mouth of the Whirlpool (Mile 170.5), turned off up that valley, and on January 10 reached the Great Divide and camped in what is now the Athabaska Pass, in deep snow, without even wood for a fire. His men were terrified at the frozen desolation surrounding them and wanted to turn back. But, Thompson writes, "in view of my scientific object, it was to me a most exhilarating sight". Eight days later he reached the Big Bend of the Columbia near the present Boat Encamp-

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ment and spent the winter there making a boat in which he ascended the Columbia to its headwaters the following spring.

On July 15, he arrived at the river's mouth to find the United States' flag flying over the little post of Astoria. The thrilling story of this short-lived post cannot be told here. It can be read in Washington Irving's delightful "Astoria," or the little classic, "Voyage to the Northwest Coast of America," translated from the French by Gabriel Franchère. Thompson was courteously received and was able to arrange satisfactory trade agreements. Early in September he returned to the Big Bend and again crossed the Athabaska Pass. The next year, according to his Journal, he went over again and brought back "six thousand skins for the Montreal market". He had established what had been sought for many years, "a feasible crossing of the mountains and a way to the Pacific Coast."



Fur Express (33)

For the next fifty years this was the route followed by the fur traders. Twice a year the Brigade, or "Mountain Express" as it came to be called, made the long journey from the east after the amalgamation of the rival companies in 1821 from Hudson Bay - along the Athabaska trail. The eastern brigade brought mail and supplies for the western posts: the western brought the semi-annual harvest of furs. At the summit of the pass, beside the little lake now known as the Committee's Punch Bowl, the two met, exchanged cargoes and news, and drank, it is said, "a jorum of punch" in honour of the Great Company. After a day or two's rest they turned back on their long and hazardous journeys. The trip from Ft. Churchill to the pass required three months; from the mouth of the Columbia six weeks, and the hardships which had to be endured on both seem almost incredible to us today.

As "passengers" with the Fur Express went many travellers whose names are remembered in history. Ross Cox and Gabriel Franchère, clerks with the ill-fated Astor expedition returning to Montreal, both of whom wrote fascinating accounts of their travels; Sir George Simpson, famous Governor of the Hudson's Bay Company; Thos. Drummond, the British naturalist; David Douglas, the Scottish botanist who was responsible for the myth concerning the 16,000 foot peaks— Mts. Brown and Hooker-at the Athabaska Pass; Father de Smet, genial missionary to the Indians, who in 1848 spent a month near Jasper baptizing and marrying the natives and undertaking a fast to reduce his weight so that he could make the arduous journey across the pass: Paul Kane and Capt. Warre, both artists, whose paintings and sketches now in government museums, are valuable records both of Indian life and of the mountains; and Sir Jas. Hector, who explored the pass but did not go on to the Columbia.

Half a century later than Thompson came Dr. Hector, the second of the two men whose names will ever be associated with the region through which the highway travels. In 1857



"The Unchartered Mountain Wilderness"

the British Colonial Office sent out an expedition to Canada under Capt. Palliser to explore the Western Territories and discover a "feasible route for a military road across the main Rockies". Hector was to act as physician and geologist and was given command of the party which was to explore the central passes. In August, 1858, he ascended the Bow Valley as far as the present Johnston Canyon. Here he turned southwest to explore a route used by the Kootenay Indians by way of what is now known as the Vermillion Pass. Hector was delighted with this easy crossing, now the route of the Banff-Windermere Highway, and recommended it highly in his report.

Once across the summit, however, his party met with nothing but misfortune. He had expected "to live off the country"

but found that the fur trade had stripped the mountains of game. The road down the western slope had to be cut through a heart-breaking tangle of deadfall and forest. Mosquitoes and flies were maddening to both men and horses. The main food they carried, some half-dried moose meat, spoiled in the steaming sun. On half-rations they fought their way down as far as the Kootenay River. Hoping that this stream might lead them back to the Divide, Hector turned up this valley, and by way of the Beaverfoot arrived at the Kickinghorse River not far from the present Wapta Falls in Yoho Park.

By now all their food supplies were gone and they had to fall back on a few mountain trout and raspberries. The horses' legs had been badly cut by fallen timber and their tempers were on edge. To crown it all, one of the tormented pack ponies plunged wildly down a steep bank near the falls, landing in a tree, and all hands had to come to the rescue. Hector's horse, in the "ornery" way of mountain ponies, wandered off into the woods and when Hector returned to catch it, it lashed out with its heels and struck him in the chest. Hector fell to the ground unconscious.

The plight of the little party was now desperate. Their leader lay with his chest badly injured, perhaps dying. They had had no real food for days, and their strength was almost exhausted. As soon as he recovered consciousness Hector sent them all off in search of game, but they returned at nightfall without having found any. In two days more actual starvation was in sight.

Realizing that further delay would be fatal, though still suffering great pain, Hector ordered his men to lift him on to his horse, and to take the way to the western slope. Up this tremendous ascent, where the road and railway rise in great serpentine coils today, they struggled, with nothing to dull the pangs of hunger but a few blueberries hastily snatched between the endless labors of chopping and felling. At last, as night fell, more dead than alive, they reached the summit.

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The famished horses snatched hungrily at the deep grass of its meadows. Nimrod, their Indian guide, caught a fool-hen, and this, boiled with candle ends and grease, made a scanty meal for five. Weary, shivering, and hungry, they fell into a profound sleep, with no thought in their minds that they had discovered the gap (now the Kickinghorse Pass) which was to be the main key to the opening up of the Rockies by railway, or that, in less than a century, a strange invention, the "horseless carriage", would glide without effort over both the Vermilion and the Kickinghorse crossings of the Divide; that their achievement would be cut in stone near the very spot where they lay, and Hector's name perpetuated forever in the beautiful mountain and lake north of the Bow Valley.

The next day they fell in with some friendly Indians, who took them up the trail over the Bow Pass and down to the North Saskatchewan, where the Banff-Jasper Highway goes today.

The following year Hector returned to the Bow Valley, ascended the Pipestone River, crossed the height of land and again reached Saskatchewan Crossing. Here he turned off and explored the Howse River and Howse Pass. winter he set off for the Athabaska River and reached the ford near Jasper House — the Hudson's Bay Company's post on Brule Lake, east of Jasper - on Jan. 31, in zero weather. Although it was after dark and they were cold and hungry there was nothing for it but to take to the icy water. The men unharnessed the dogs, pitched them into the river, pelted them with ice to make them swim for the other side, then waded across themselves with sleds, loads and all on their shoulders, through water which was over their waists. Clambering out on the other side each man stiffened at once into a mass of ice and they found the whimpering dogs "frozen into a lump with their harness". However, Hector observed cheerfully in his report, "a two-mile run through woods to Jasper House" soon warmed them up. Experiences such as these were the

commonplaces of the lives of the first pathfinders, and there were no radios or newspapers to dramatize them.

By 1860 the game had become so scarce that the Fur trade was no longer profitable. The picturesque "Brigades" came to an end and the Great Company closed its posts in the Athabaska Valley. The discovery of the Yellowhead Pass had opened a new and easier route to the west, and during the great "gold rush" to the Cariboo, many travelled on foot along the Athabaska Trail, through Jasper Park to Jasper, up the Miette and across the Yellowhead Pass, on the quest for gold. Many of them perished on the way of exhaustion or starvation. Others were swept to death in swollen rivers, or down unknown cataracts.

In the early seventies came engineers looking for a route for the projected Canadian Pacific Railway. Mr. Walter Moberley, C.E., explored the Howse, the Athabaska and the Yellowhead Passes and reported that the first would be an entirely feasible route.

Private Exploration

In the nineties there began an important era of private exploration. Distinguished alpine climbers, members of the (British) Alpine Club and the Appalachian Club of Boston among them, many of whom had won their spurs in the Swiss Alps, turned to this fresh field where hundreds of virgin peaks challenged their skill and love of adventure. These men, actuated only by the love of science and of one of the noblest sports in the world, added greatly to the sum of knowledge concerning the mountains, and particularly of the remarkable region through which the Banff-Jasper Highway now runs.

In 1892 Dr. A. P. Coleman undertook his third expedition in search of Mts. Brown and Hooker, the fabled giants near the Athabaska Pass, which David Douglas had reported to be over 16,000 feet in height. Dr. Coleman came down Poboktan

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Creek to the Sunwapta and thence to the falls. Here he turned west and went up the west branch of the Athabaska and its tributary, the Chaba, and discovered beautiful Fortress Lake, but found no peaks answering to Douglas' description. The next year, starting from Edmonton, he explored the Whirlpool Valley and reached the Athabaska Pass, only to find that the fabled giants were a mere 9,000 and 10,000 feet, thus ending a quest which had excited alpinists for years.

In 1893 Messrs. W. D. Wilcox and S. E. S. Allen, young Yale students, came to Lake Louise and undertook a series of climbs along the Divide, and in 1895 Mr. Wilcox, with Bill Peyto as guide, went over the Wilcox Pass on the way to Fortress Lake. Two years later Professor J. Norman Collie came over from England, bringing with him the first Swiss guide. Peter Sarbach. He explored the Freshfield and Lyell groups, and in 1898 went up the Alexandra accompanied by Mr. Hugh Stuttfield, and from Mt. Athabaska had the first sight of the Columbia Icefield.

In 1902 Sir Jas. Outram with Jimmy Simpson, Fred Stephens, and Christian Kaufman as guides, crossed Bow Pass and went down the Mistaya to the Saskatchewan Crossing. explored the Howse River and the Alexandria and went on to the Sunwapta and the upper Athabaska, climbing many of the loftiest peaks. Others who fitted out expeditions were Mrs. Wm. Schaeffer (later Mrs. Warren), who undertook two expeditions to the north and was the first to reach Maligne Lake. The Rev. C. S. Noyes, Rev. H. P. Nicholls, with C. S. Thompson and G. M. Weed, with Ralph Edwards as guide. explored the Siffleur, discovered the Dolomite Pass, and ascended Bow Glacier from Bow Lake. Other names which will always be associated with the early days of exploration are Jean Habel, Prof. Fay, Pres. of the Appalachian Club, R. L. Barrett, J. M. Thorington, G. E. Howard and A. L. Munn. Lewis Freeman and Byron Harmon photographed the region as far as the Columbia Icefield, and in 1922 and 1923 two expeditions, under the leadership of Henry de Villiers-Schwab,

explored the Clemenceau Icefield and conquered Mt. Clemenceau.

The information brought back by these travellers, though extremely valuable, was unrelated. Not until the Canadian Government undertook the survey of the Interprovincial Boundary—a tremendous task which involved many years and the climbing of scores of peaks—were any complete maps possible. Men like Dr. A. O. Wheeler, founder and first president of the Alpine Club of Canada, R. W. Cautley, C.E., and M. P. Bridgland, D.L.S., led the parties which undertook this arduous task and their reports, always graphically written, are indispensable sources of reference today.

The Packer and the Packhorse

N the history of the pathfinders of the Rockies there is one set of men who deserve a chapter to themselves. These were the early guides and packers, the professionals, or as they are now irreverently called, the "dude" guides. They were, they still are, a splendid type of men, hardy, expert with the axe and the handling of obstreperous pack ponies, as well versed as the Indians in woodscraft and the ways of wild animals, and usually with a sense of humor that saved many a trying situation.

"Old-timers" like Bill Peyto, Jimmy Simpson, Ralph Edwards, Fred Stephens, Tom Wilson, Sid Unwin, Bill Warren, Fred Ballard, the Otto brothers, and the three Brewsters—Jim, Fred, and Jack—you will see their names in all accounts of explorations since the late eighties, commemorated often in

THE PACKER AND THE PACKHORSE

peak, lake, or river, though, regrettably, not so often as politicians and military heroes.

Without their skill, They were the real trail-makers. knowledge, and endurance, the private expeditions undertaken by others could never have found a way through. They had to be master of a dozen skills. First of all came the difficult art of throwing the diamond hitch-an ingenious arrangement of loops of rope, learned, it is said, from the Mexicans, by which the bulky pack could be securely fastened to the back of a highly resistant pack pony. They had to be expert axe men, too, for the day's work often involved hours of chopping through deadfall and dense timber. They were quick to note the faintest signs left by a wild animal in passing and wise to its possible behaviour. As the day wore on their chief anxiety became the finding of a suitable campsite with sufficient grass for the horses. Once found, and the pack ponies freed from their galling burdens, the horses could be left to forage for themselves. The building of a fire—in dry weather or wet the cutting of long poles for the teepee and balsam boughs for the beds were the next jobs. But in less than an hour after arrival the tents would be up, supplies unpacked, beds made up, the tea boiling merrily over the fire, and the bacon sizzling in the pan.

Another technique, developed by a few, was the wrangler's language, in which the use of profanity became an art. Lewis Freeman says it poured out, "words winged with fire, but flowing with the easy inevitability of the spinning of the turbine of an ocean liner." Free, natural swearing, he says, "meant a well-driven, well-treated pack train. One of Nature's own swearers is also one of Nature's own gentlemen". Freeman's description is probably exaggerated, but Nature's own gentlemen, certainly, most of them were and are, as anyone who has had the good fortune to travel under their guidance can testify.

Although their patience was often tried by the futile ques-

tions of tourists, they seldom lost their peculiar sense of humour, though sometimes at the expense of veracity. One day a persistently inquisitive visitor asked: "I want to know. All that snow up there's not real, is it?" "No ma'am", replied the guide gravely. "It isn't. The C.P.R. and the government send men up here every spring to paint the peaks white just as a tourist attraction."

Bacon, flour, beans, sugar and tea, an axe, and a thick blanket, these were considered amply sufficient for the trail in the early days. When the "dudes" came and people began to worry about vitamins, the packs got heavier. Canned milk, soups, jam, tinned vegetables and fruit—these were concessions to the flesh which sometimes raised the evebrows of the oldtimers. One year an out-size Chicago millionaire and his wife arrived to go out on a two-weeks' expedition. He brought with him a table and four chairs which folded up in an ingenious but complicated way into small compass. This and their rubber mattresses required an additional pony, but the millionaire did not mind, though the packer did. The "contraption", which was coldly referred to as the "dining room suite", had to be packed and unpacked for every meal and there were muttered wishes that it might be translated to Hades.

A little grey mare with one eye, called "Good-eye", was elected to carry it. She had a loveable disposition but she was a social climber and always insisted on leading the procession. One day, travelling along a side-hill trail $2\frac{1}{2}$ feet wide, Good-eye's pack-train met another proceeding in the opposite direction. There was no room to pass and the smaller, led by the grey, had perforce to give way. While the head guide was getting his dudes and their riding ponies down a precipitous slope, Good-eye stood guard, glaring fiercely at a big black which headed the other procession. But a few feet below she suddenly spied a tempting bunch of grass and in a moment of weakness snatched at it. That moment was enough for the

THE PACKER AND THE PACKHORSE

black. He shot forward, squeezing in between the grey and the rocky wall. There was barely room for one pack pony on the trail, let alone two. Before she knew what had happened Good-eye was upset and somersaulting down the steep slope over logs and deadfall into the lake five hundred feet below.

It looked like the end of the little mare whom everybody had come to like. Nothing of her could be seen but four pathetic little hoofs sticking out of the water. But in a few moments the pack slowly began to right her; her head came to the surface; she snorted angrily and struck out gamely for shore. The guide rushed down and helped her out of the water. She stood shivering with shock and indignation, but careful examination showed not a bone broken. But the "dining room set" was smashed into a million pieces, a tragic end which raised the spirits of everyone, even of the millionaire and his wife.

The Swiss Guides

Another set of men who played their part in early exploration were the Swiss guides. These men, trained in the Swiss Alps, were brought out from Switzerland by the C.P.R. and domiciled in their picturesque Swiss village at Golden, B.C.



It was their job to find a way up the unknown peaks, and most of the ascents of the loftiest and most difficult mountains between Lake Louise and Jasper were made under their leadership. Men like Hans and Kristian Kaufman, Peter Sarbach, Edouard Feuz, Christian Häsler, Christian Klucker, and their like, delightful companions on the trail, cool, skillful and intelligent on the ascent and modest after achievement. Some of them, like the men they led, have "gone west" on the longest trail of all, but their names are perpetuated in peaks, several of which are along the highway, and in the memories of those who knew them. A new generation of alpine guides, most of them born in Canada but equally skillful and trustworthy, has succeeded them.

National Park Forests

And How They Are Protected



The forests of the Rockies! How much they add to the beauty of the mountains! They fling rich cloaks of green about the stark peaks, softening the harsh contours, clothing the bony ribs and tremendous flanks with their luxuriant folds. They climb upwards in groups or great companies like armies storming a citadel. Tons of rocks are flung down upon them from the heights. Avalanche and snowslides cut wide swaths in their thick ranks. Swollen

rivers undermine them and sweep them away. They close up their ranks, undefeated.

And how beneficent they are! Winnowing the air from impurities, scenting it with the perfume of their healing gums,

NATIONAL PARK FORESTS

manufacturing by a subtle chemistry the vitalizing ozone—most exhilarating of all intoxicants! Providing homes for wild animals and birds in countless numbers! Holding, too, like great sponges, the moisture which must be fed out little by little to give life and fertility to the thousands of miles of wheatlands spread out below on the prairies!

In the lower altitudes grow the willows and aspens, the Balm-of-Gileads, and the graceful mountain birches. Their lighter green makes a charming contrast with the darker green of the conifers. Higher up grow the mass formations of the Lodgepole pine, the prevailing tree of the eastern slope. Its hard cones and long-lived seeds enable it to persist in the face of many adverse conditions and its cheerful green—lighter by several tones than the dark forests of firs and cedars which clothe the Selkirks—harmonizes beautifully with the platinum greys and pinkish hues of the eastern limestones.

The white spruce is found in many of the tributary valleys opening out of the Bow Valley and along river flats in Jasper Park. The bronze-hued Englemann spruce often makes a band of forest at an altitude of over 6,000 feet when even the hardy jackpines have surrendered to the cold. Highest of all grow the balsam fir and the Lyell's larch, that loveliest of all the conifers, whose foliage in Autumn turns to brilliant gold.

The care and protection of these forests is the heaviest responsibility of the guardians of the national parks. Without their green luxuriance the landscape loses all beauty, yet how difficult they are to protect. The curator of a national art gallery may rely upon his fire-proof walls, upon steel locks and bars. But the national parks are open on all sides.

The arch-enemy of the forest is fire, an ever-present menace on the eastern slope where precipitation is so light. Following a winter of light snowfall, half of which may be licked up by Chinook winds before its moisture penetrates the soil, there may come weeks of unbroken sunshine. Under the steady

glare of an almost cloudless sky, fanned by warm winds, the forests become dry and brittle as tinder and only too ready for attack. The tangle of deadfall, the carpet of dry leaves, supply excellent kindling, and a tiny spark will be sufficient to start a conflagration. A half-burned cigarette tossed careless away, an improperly extinguished camp-fire, sometimes even the rays of the sun focussed upon a bit of broken glass, will be enough.

Forest protection, then, becomes a chief necessity, and in the parks a most efficient service has been devised. It involves a comprehensive system of trails radiating from Banff and Jasper, hundreds of miles of forest telephone lines, "caches", where tools and portable fire engines are stored for emergency, lookout towers, and air patrols.

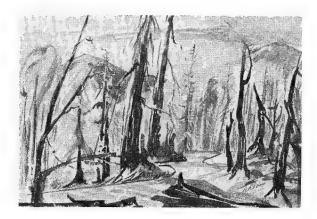
Each warden is equipped with a light-weight, self-priming, centrifugal pump which can be packed on a pony, and a light one-man hose reel. If he sees smoke rising where it has no business to be, he notifies headquarters, saddles his pony, packs the equipment on another and goes to investigate. If the outbreak is a small one he can probably extinguish it alone. If it shows signs of spreading he will call headquarters for assistance. Usually fire outbreaks can be controlled before any very great damage is done, but forest guardians take no chances and during the dry season they may be said to sleep not only with one eye open, but with ear and nose, too, alert for any warning sign.

Fire-weather recording stations, which have been established in recent years, have proved to be a valuable assistance. Delicate instruments provide daily records of precipitation, evaporation, and relative humidity, temperatures and wind velocity. From these data park officers can compute from day to day a reliable measure of fire hazard conditions and form predictions as to what the morrow will bring. Additional forces can then be sent out to areas where the fire hazard seems greatest and staffs warned to be on the alert for an emergency. Although fire

NATIONAL PARK FORESTS

fighting, like war, is becoming highly mechanized, it, too, must still depend upon man power for ultimate success.

If a really serious outbreak occurs the superintendent has power to commandeer the services of every man employed in the park. Two or three hundred men, perhaps, with tools, fire engines, food and supplies, will be despatched to the scene. The chief warden assumes command, forms a plan of attack, and places his forces at the most strategic points. Burning spars carried upward by the strong draught may fall a mile away and give rise to new outbreaks, so that sometimes twenty fires will be raging at once. Hour after hour, their faces blackened by smoke, their eyes red and smarting, their hands blistered, the men will fight on, scarcely stopping to snatch a few mouthfuls of food or drink. Only after midnight, when the winds drops and the fire cools down for a few hours, can they break ranks for a little sleep. A fire of this character usually starts outside the park boundaries, but to keep it from entering the park may require days of terrible effort. That is why Park visitors are asked to be very careful with matches, cigarettes and camp-fires.



Giant Skeletons Left by a Forest Fire (47)

The other menace which may seriously threaten the forest is the destructive insect, and from these even the hardy forests of the Rockies are not immune. The jackpine is subject to attack from the bark beetle; the white pine may develop a "blister rust", while parasitic plants like the mistletoe may cause blight. In this defense the Warden Service co-operates with the trained experts of the Department of Forestry and the Entomological Branch of the Department of Agriculture. Surveys are undertaken regularly, specimens of insects collected for identification, and all affected trees immediately cut and burned.

Experiments are also being carried on with regard to the best methods of thinning the forest. The French method of thinning from below and the German method of thinning from above are both being tried out, but it will require some years to reveal which is preferable in the Rockies.



Wild Life Sanctuary

To make the wild places of the land sacred, keeping the streams pure, and planting fresh blooms along their edges; to preserve the air crystalline and without taint—sparing all living creatures as far as possible without destroying them—this were indeed to open up riches for mankind of which few dream.

EDWARD CARPENTER.



Rocky Mountain Sheep

T was only a dream when Carpenter wrote this in 1881. He could not have imagined that in thirty years it would become a fact. That under the leadership of the United States and Canada great sanctuaries would be established for the protection of wild creatures and of the wild beauty of the earth. In the depressing history of the last fifty years there is one peace treaty of which man may be proud. It was not a universal treaty, but it declared that within certain broad areas the old war between man and the wild animals should come to an end. Man, the aggressor, agreed that within specified regions, called National Parks, he would lay down his arms, put away his traps and his poisons, and permit all wild creatures to live in peace.

To this magnanimous gesture the animals responded with equal magnanimity. Through some mysterious wireless system of their own, which we do not yet understand, apparently the word went out that within the National Parks man was prepared to become a friend. It took time—but in view of their past experience a remarkably short one—to build up their

trust and confidence, but even in two years a marked change appeared.

When the first fur traders had entered the mountains a century before they had reported the country to be "full of game". Twice a year for fifty years the Brigades carried back to eastern posts "immense packs of precious furs". But by 1850 the trade began to slacken. By 1860 it had dwindled so that it was no longer profitable and soon came to an end. The few travellers who penetrated the mountains in the nineties and early years of this century reported that the whole eastern slope of the Rockies appeared to be "denuded of game". Mountain goat and sheep had almost disappeared; beaver and marten, elk, moose, and even deer were rarely seen. But from 1911, when the National Parks Branch was created and an efficient game warden service established, wild life of every kind began to increase. Not only was the indigenous population reported to be gaining in confidence and numbers, but apparently the word had gone out beyond the park boundaries. Every time a new trail was cut connecting with outlying districts the animals made use of it, and would be seen trotting confidently along it into this "brave new world". Elk, moose, and deer are known to have come in from the Prairies. The Douglas caribou, a rare species almost extinct, which formerly had its habitat in sequestered valleys across the Divide, penetrated the formidable barrier of the Ramparts, in Jasper Park, and came into the peaceful Tonquin Valley to breed.

Wherever one goes now, along all the highways and trails, one is apt to see wild animals. This is another reason for driving carefully, especially at night. And how much these brief encounters add to the pleasure of the day! To catch a glimpse of Bighorn sheep posing like sculptures on a rocky ledge; to come upon a moose feeding unconcernedly a hundred yards from the road; to see a velvety black shape ambling off through the forest, or a pair of cubs playing hide-and-seek up a tree gives one a peculiar warm thrill and makes the day memorable.

It is quite true to say that the road becomes full of exciting possibilities. "You never know whom you may meet".

It is a good idea if you want to take pictures of wild animals to keep the camera in readiness and if you come upon one to bring the car quietly to a stop and "shoot" without getting out. The wild things will usually stand looking at a car with curiosity, but the slamming of a door and the sudden appearance of a moving human being may startle them into flight.



Moose (51)

For the scientist and student of wild life these great national park reserves constitute something elsewhere very difficult to find—a complete preservation of the environment. Here the natural relationships between the different species of plants and animals are maintained, so far as is humanly possible, without interference, and Nature left to work out those occult mysteries of equilibrium which we call the "balance of Nature". Throughout the national parks the smaller predatory animals are left unmolested. They are not only beautiful and interesting in themselves, but they help to maintain the strength and vigor of the species they prey upon. Even the larger ones, such as the cougar and lynx, have their part to play, although if they seem likely to become a menace to visitors the wardens are empowered to shoot them.

Bird Life



Bird's Nest

Though there are many species of birds to be seen in the parks, by the time the visitor arrives the song period is pretty well over and they are more difficult to identify, but there are a few which even the untrained can recognize. Even from a motor car one may

watch a Golden eagle or an osprey planing magnificently above the heights, note the blue flash of the Belted kingfisher, or hear the sharp rivetting sound made by the Hairy woodpecker or the Yellow-shafted flicker. On the trail the chickadee's cheerful little song often relieves the solitude of the forest, while in every alpine garden, even up to the very verge of the perpetual snows, you may see the tiny Rufus hummingbird, poised over the late opening flowers.

If you stop almost anywhere for a picnic lunch, a few minutes after the basket is opened an uninvited guest may fly into a nearby tree and fix a speculative eye upon the feast. He is the Canada jay, or whiskey-jack, a corruption, it is said, of his Indian name "Wisagatchak". He is a largish bird, plainly dressed in two shades of grey, with a long tail which he manages awkwardly. According to an Indian legend his tail was once short, his wings small, and his head so much too large for his body that the other birds all laughed at him. At last, Icaruslike, he decided to make new wings and tail for himself, so that he could appear at the great "Spring Meeting" of the birds and not be ashamed. He begged and collected a pile of feathers from other birds and set himself at work making a pair of large wings and a long tail in which, when he tried them on, he thought he looked very fine. When he attempted to fly, however, he could not manage them, and appeared so awkward and clumsy that all the other birds laughed at him more than Discouraged and ashamed, he flew off into the forest and lived there by himself, very lonely. At last the great Manitou of the Birds observed the plight to which the poor fellow's vanity had brought him and he said: "It is too late now to change your feathers, but since you are so lonely, I will tell the Indians always to welcome you about their camp-fires."

The whiskey-jack, however, has no racial prejudices. He will come as readily to the white man's table as to the Indian's, and unless you keep a sharp lookout, you will find this cunning rascal stealing a bit of bacon from under your very nose.

Another common bird is the Franklin's grouse, or "Foolhen", a name he has earned by his apparent lack of intelligence. He is either so stupid or so friendly that he never suspects

danger and will often fly down right in front of an oncoming car.

A complete description of all the wild life of the region can be found in the interesting "Animals and Birds in Banff and Jasper", by Kerry Wood.

Wild Flowers

"One should visit the Canadian Northland with eye and mind alert to the beauty of Nature's handicraft; the artistry of all of it; from the broad sculpturing of crag and chasm to the delicate perfection of a single flower."—I. Monroe Thorngton.

Strange as it may seem it is in the chill air of the higher altitudes that Nature grows her loveliest wild flower gardens. Hundreds of varieties have been identified in the Canadian Rockies and, armed with a Flower Guide,* every visitor may learn to greet many of them by name. Flower lovers who stop anywhere along the highway and take even a short walk through the woods or to the borders of some nearby stream can find fifty varieties in half an hour.

The most characteristic flower, and one that grows everywhere, often so close to the roadside that it brushes the wheels of passing cars, is the Indian paintbrush. It is found in several shades from cream to red and its stiff little torch of color brightens many a hillside. In early summer the red mountain lily grows abundantly and a little later in the deep woods you will find masses of the delicate twin flower—Linnaeus' favorite—growing in great cushions of pink, while in late July and

^{*} Wild Flowers in the Rockies, George A. Hardy.

WILD FLOWERS

August the water willow herb will flash its masses of light purple from the borders of streams.

But one must remember that in the mountains the flower calendar varies with the altitude. As one goes upward the hand of the year moves back. Spring comes to the lower valleys about the middle of April, but June may be half over before the snows leave the high passes, and in perhaps less than two months winter will come again. In these high meadows color and fragrance run riot. Millions of little plants, most of them crouching low for protection, bursting out of these chilly soils the moment the snow is gone like school children let out for the holidays. So much to do in so short a time! Leaf, bud, blossom, fertilization, and ripened seed—a job which valley flowers may take their own sweet time about—all to be accomplished before the frosts of August arrive. The set rules of precedence, the time table of arrivals, so carefully observed in valley gardens, go by the board. It is every flower for herself, for certainly the devil frost will get the hindmost. Blue forgetme-nots and larkspurs, golden arnicas, violets, columbines, white dryas and fragrant heliotropes, and many others, you will see them all blooming together, making a mosaic of all the colors of the rainbow.

The highway has brought some of these beautiful alpine meadows—formerly the reward only of the mountain climber or explorer—within easy reach and it is worth while staying over at some place like the Columbia Icefield Chalet or Bow Lake just to ride up to one of the mountain passes, a few miles away, where the profusion, color, and fragrance of these natural gardens reach their height.

Canada has no true edelweiss such as is found in Switzerland, but there are several species of everlastings, one of which delicately tipped with pink, is found abundantly in Jasper Park, and has been called the Cavell Flower, in honor of the English nurse, heroine of the first world war.

Fish and Fishing



The Banff-Jasper Road is no speed highway. The man who rushes over it in a few hours will miss much. Here, if anywhere, "it is better to travel than to arrive". And as an excuse for lingering, as a way into intimate friendship with the spirit of the mountains, there is nothing better than a love of fishing. All

along the way from Banff to Jasper there are lakes and streams, hidden away in the valleys, where a man can catch his limit. Some of them are within walking distance from a stopping place. Some, ten miles or more away, will be an inducement to take a pony, or better still, a camp outfit, up valleys as silent as when the first Indian stole through them on moccasined feet.

Rainbow, Dolly Varden, Cutthroat, and Salmon Trout are the indigenous species, and in these ice cold waters they have a firmness and flavour unsurpassed. Loch Leven trout, which spawn in late September or early October, have been introduced in some lakes with good results. Since the open seasons vary for different species, fishermen should apply at Park Headquarters for a copy of the Fishing Regulations. He will also be given friendly advice as to the likeliest spots, and most successful kinds of bait, and if he does not bring his own equipment, he may buy or rent it at either Banff or Jasper.

The Road Itself

"A land most noble, amongst men renowned, lying upon the high mountains; where each tree is straight as an arrow and where there never falleth leaf off, for they are ever-green; beautiful and pleasant, full of happiness."—A description of the Terrestrial Paradise from an MS. in the British Museum.



Mt. Fryatt

HE Banff-Jasper Highway—perhaps the finest scenic road on the North American continent—leads through a "most noble land". One could easily spend a whole summer exploring the rich regions through which it leads. But merely to travel over it in one direction is a memorable experience, an experience that is doubled if one makes the return journey, for one sees then different faces of the moun-

tains and an entirely new, sometimes even more beautiful, arrangement of the landscape. The road should be taken slowly, for it has much to offer. There are heights with Pisgah views to be climbed; ice caves, glaciers, vast snowfields to be explored; alpine meadows brilliant with wild flowers to be visited; jade green mountain lakes and streams to be viewed or fished; canyons, waterfalls, beaver, moose, elk, deer, and bear to be seen and photographed.

Unlike many of the great alpine regions of older lands, these mountains have little history. They have not yet been humanized by man's occupation. They still wear an air of exquisite loneliness, of primitive wildness. And because they are young mountains, the dramatic struggle between the peaks and the elements is still visibly going on. The work of creation is not yet finished. The master artists are still in their workshops; you can hear the reverberations of Thor's hammer and see the chips struck off by recent carvings. The forces of destruction, too, which will eventually raze every mountain range to the level of the plains, are at work on every side, but here, as yet, victory is still with the mountains. Above the green and smiling valleys and the luxuriant skirts of pine forests the great heads rise in aloof serenity, unconquered, challenging the pettiness of a man's heart.

Along the way there is something for every sense to delight in. Form, mass, line, color, rhythm—all the things that we look for in art—are here in superb variety. Canvases painted by Nature on a scale as vast as that used by the Seventh Angel of the Apocalypse. Every mountain form—pyramid, wedge, round tower, castle, cathedral, slender obelisk and minaret—the same themes repeated with endless variations. And for contrast, the slim, upstanding boles of the jackpines with their myriad spear-pointed tips; the bright tress of a waterfall gleaming against a dark wall of rock; the plane of a blue lake in an arc of cirque or green forests; long, sweeping diagonals of talus slopes, the rhythmical curve of glaciers, and high up, that

THE ROAD ITSELF

"purest, loveliest line in all Nature, the curve of a snow cornice about the shoulder of a peak".

Visitors to the Rockies sometimes miss the rich purples found in the Scottish hills and the Swiss Alps. It is true that because of the dryness of the air the colors are lighter and sometimes the eye must be alert to catch them. In the eastern ranges of the Rockies the rocks are limestones of a pearly, platinum grey. Nearer the Divide there are quartzite intrusions and the peaks are darker, often strikingly banded with old red or splashed with purple.

In the thin clear air of these high altitudes the sunshine has a peculiar intensity. Snowpeaks and glaciers sparkle against a vividly blue sky with a kind of prismatic radiance. Every leaf and pine needle seems to give off light. But it is only in the lakes and the wild flower gardens that color grows intense. The wild blues and greens of the mountain tarns are almost unbelievable. Greens of every tone—metal-green, dawn-green, green of emeralds and that stone of copper called malachite; and blues equally vivid, from the robin's egg to the deepest sapphire; often mingled, taking on those thrilling hues one sees in peacocks' tails and the throats of hummingbirds.

As the day wears on a misty blue fills every valley, wraps itself about the peaks until the whole landscape seems saturated with this one color. The cloud shadows which drag themselves like trailing scarves over the peaks are indigo: even the shadows of the pines etched diagonally across the road are a warm navy, and when a mountain bluebird or a kingfisher goes flashing by, he, too, wears the mountain livery.

Sunrise and sunset can bring transformations so magical that they make one catch one's breath. Then, delicate, sudden mutations of color will slide over the grey limestones and white ice, and as the swinging beam of the sun touches them, the summits will glow with rose, gold, or violet, as if a fairy lamplighter were setting them alight. The illumination may

last only a few moments, but it never fails to startle one with wonder and delight.

And for rhythm, there is the road itself, rising and falling, now in the valley, now above it, running smoothly through long green stretches of forest, swerving around the edge of a blue lake, or sweeping up in wide spirals which afford magnificent vistas stretching away for miles, with one great valley succeeding another like a majestic mountain processional.

The Town of Banff

HE starting point for the Banff-Jasper Highway, if one takes it from south to north, is the picturesque little town of Banff. It is a unique little town, half "Western", half sophisticated, and wholly alpine, with a special dignity and grace due to the fact that it is the capital of a great National Park. Motorists from every part of the continent eventually find their way to it, and on any summer's day you may see cars bearing the license plates of every province in Canada as well as every state in the Union.

The town has a permanent population of about 2000, which is often swollen in midsummer to ten or twelve thousand on particularly busy days. This puts a big strain on the available accommodation, so that it is the part of wisdom to make reservations well in advance. There are several hotels, including the large luxury hotel, "The Banff Springs", operated by the Canadian Pacific Railway, as well as Bungalow Camps, Cabins, and Government Campsites, equipped with stoves, fuel, and other conveniences. During the summer a great many of the private residents open their homes to visitors, and both accom-

THE TOWN OF BANFF

modation and rates are approved by the government. The Government Information Bureau is the reliable centre for all kinds of information about the park and highways, and a list of available accommodation, with small maps of the town showing how to reach your destination, may be secured upon application.

Banff has several good service stations, and if the car needs checking over before beginning the 200-mile run through the mountains, this is the place to have it seen to.



Banf)

Banff commemorates the energy, perseverance, and endurance of that doughty Scot, Sir Donald Smith, later Lord Strathcona, who drove through the construction of the Canadian Pacific line in the face of engineering and financial difficulties almost insuperable. He named the townsite after his birthplace, the Scottish town of Banff, and the tradition has persisted. When the Canadian Pacific Railway re-built its great hotel they chose "Scottish-Baronial" for its architecture. Each year Highland Games and Dances are held at Banff, and curling is one of the most featured of its winter sports.

It was the discovery of its natural hot springs which first directed attention to this particular spot in the mountains. Though they were not discovered until 1883, long before the white man came the Indian had known and feared these hot waters which came up so mysteriously from the bowels of the earth. When De la Verendrye, the first explorer to cross the plains, reached the foothills, the Indians told him fearsome stories of the Bow Valley and of these strange waters. Nowhere, they said, did the rivers run more wildly, nowhere was the voice of the dread Thunderbird more terrible. It was, undoubtedly, the home of evil spirits, some of whom took the form of savage beasts. Alarmed by these horrifying tales De la Verendrye's men refused to enter the mountains and he was forced to turn back.

The surveyors who came to lay out a route for the railway belonged to a more sceptical age. Tales of evil spirits, even the highly circumstantial story of an Indian who told them how he had stumbled upon this strange cave at nightfall and, looking down through the opening in its roof, had himself seen the evil spirits dancing about a boiling pot, and the skulls and bones of the victims they had eaten lying about on the floor—even this did not deter them. The palefaces had laughed and said: "We will build an iron horse which will run through the mountains so fast that no evil spirits will be able to catch it". A few years later Sir Donald Smith triumphantly drove

THE TOWN OF BANFF

the last spike in the railway at a little town in the Selkirks and the first train travelled across the mountains. "And," say the Indians, "at the sight of the Iron Horse and the sound of his terrible voice, the mountain gods fled in terror and have never shown their faces in the Cave again."

There are many points of interest to see at Banff and so many things to do and enjoy that one is tempted to linger on indefinitely. There is a championship golf course in a mag-



Lake Louise (63)

nificent setting, hundreds of miles of trails for the rider, a fine stretch of water for boating or canoeing, the Hot Springs for bathing, and interesting peaks to climb. Clubs such as the Alpine Club of Canada, the Sky-Line Trail Riders' Club, the Hikers' Club, have organized summer camps which enable visitors to enjoy the mountains with others of like taste and at less expense, and there is an excellent summer school with classes in painting, handicrafts, and dramatic production.

A full description of these and other attractions is found in the illustrated Guide to the Banff Park, "Through the Heart of the Rockies".



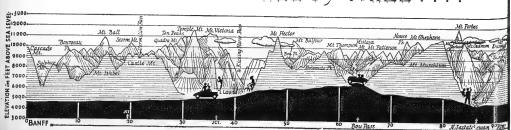


THE BANFF JASPER HIGHWAY



Mt. Rundle, Banff

MILE BY MILE.



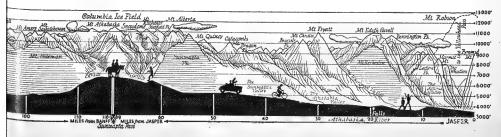
FIRST SECTION: BANFF TO LAKE LOUISE JUNCTION **36.5 MILES**

Mileage rrom Banff 0 HE Banff-Jasper Highway leaves the town just 185.5 east of the Banff Railway station, crosses the C.P.R. main line and turns west up the wide and beautiful valley of the Bow River. For its

Mileage from Jasper

first 36.5 miles, as has been said, it utilizes the Trans-Canada Highway (No. 1), which, like the railway, crosses the Great Divide by way of the Kickinghorse Pass. This great transverse valley of the Bow, which leads directly from the plains to the pass, forms a natural route for travel. It was probably created when the mountains were uplifted, but has been deepened and widened greatly during millions of years by the eroding forces of water and ice. The glacier-born river, which the road will accompany to its source in Bow Lake (Mile 65) is here enjoying a brief breathing spell between its mad rush down from the Divide and the turbulent rapids and falls below the town. The river is navigable for about 9 miles, and this quiet stretch of water, with the three Vermilion Lakes in which the stream widens, affords delightful opportunities for boating canoeing.

- 1.3 A little over a mile from the town a road branches 184.2 off to the right, leading in 3½ miles over Stoney Squaw Mountain to the Championship Ski-jump on Mt. Norquay (8,257 ft.). This is one of the most popular short drives about Banff, affording fine views of the valley and town, while the Ski Clubhouse near the summit is the centre of activities during the winter sports season.
- 1.5 On the left, surrounded by grassy meadows, is the 184 first of the three Vermilion Lakes, which owe their name



Mileage Mileage from from Jasper

to underlying ferruginous beds, that in certain lights give a reddish cast to the waters.

2.5 The second of the trio, with its perfect reflection of 183 the grey slopes and deeply bitten crest of Mt. Rundle, is probably the most frequently painted and photographed landscape near Banff. This mountain, a striking example of the so-called "writing-desk" type, rises directly above the golf links at Banff, and was named in honor of the Rev. Robt. Rundle, first white man to enter the Bow Valley, who came in 1840 as missionary to the Indians and to whom they paid this sincere tribute: "Poor he came among us and poor he went away, leaving us rich".

The long wooded slopes of Sulphur Mountain fill in the view to the south, and between it and Mt. Rundle can be seen the narrow cleft through which the Spray River flows down to join the Bow.

- 3. Between the second and third Vermilion Lakes, a few 182.5 colonies of beavers have made their homes, and though these busy little engineers are seldom visible until twilight, signs of their work can be seen on the bank in freshly cut trees and stumps and in the skillfully constructed dam and lodges in the stream.
- 3.5 Across the third Vermilion Lake to the south lie the Sundance Canyon and Pass, and, leading about the farther shore, is the trail to famous Mt. Assiniboine (11,870 ft.), the loftiest and most difficult peak in the Banff Park, often called the "Matterhorn of the Rockies". The summit is invisible from the Banff-Jasper Highway, but can be seen from the Lookout at Mile 51 on the Banff-Windermere Highway.
- 4.5 To the north there is a brief glimpse of Mt. Edith 181 (8,380 ft.), with its slender, pointed tower. This is one of the few Dolomite peaks in the park, often likened to the Little Dru at Montanvert, Switzerland. Its sheer rock face challenges the experienced mountaineer, but it is much too difficult for the amateur.
- 5. The road rises and runs through open, park-like woods 180.5 of Lodgepole pine, poplar, and balm-of-Gileads, with here and there a few white spruce, a tree which usually

Mileage from Jasper

grows only at much higher altitudes. Soon to the north the low bare slopes of the Sawback Range come into view and a watch should be kept for Bighorn sheep. This has been their range for the last thirty years and often as many as fifty have been seen here at one time feeding quietly within a few yards of the road. From this range the Canadian Government has donated specimens to Zoos in many parts of the world and sent small herds to former ranges which had become depopulated.

The bare hills to the west are a range for Rocky Mountain goat, but these hardy alpinists usually go up to the heights above timber line during the summer to escape the heat and flies, and are seldom seen here until autumn.

- 5.5 Across the valley the view opens, and stretching away 180 for miles to the south can be seen the Bourgeau Range, one of the longest in the park. On its western side is the valley of Healy Creek, route to the Simpson Pass. In 1841 Sir George Simpson, first Governor of the Hudson's Bay Company after its amalgamation with the rival Northwest Company, sailed from London to Halifax and Boston, came overland to Montreal and thence by canoe and horseback to the present Edmonton, Alta. Here he engaged an Indian guide named Peechee, who told him of a route used by the Indians far to the south. Entering the mountains by way of Devil's Gap his party camped at Lake Minnewanka. The next day he passed the present site of Banff and turned up the Bow Valley. Fording the river near the mouth of Healy Creek, he turned up that valley and crossed the Divide by the pass which now bears his name. Descending the west slope by the Simpson River, he came out to the Vermilion River, and thence followed the route of the present Banff-Windermere Highway to the Columbia Valley and the old fur trail route to the Pacific. monument commemorating his journey about the world —the first involving a crossing of the Rockies—has been erected by the Canadian Government at Mile 38 on the Banff-Windermere Highway.
- 6.9 On the left a sign points to a lookout from which 178.6 there is a fine view of the Bow Valley. "Af-ton-ro", an

Indian word meaning "evening peace", is the name of this lovely spot, and if the motorist is fortunate to see it on a summer evening when the last rays of the sunset are falling across the valley, turning the poplar trunks to gold and touching the white peaks over on the Divide with rose and amber, he will agree that the name is a fitting one.

7.2 On the west side of the Healy Creek Valley rises the 178,3 massive bulk of Mt. Bourgeau (9,615 ft), named by Hector after Eugene Bourgeau, the botanist who accompanied the Palliser Expedition. Bourgeau travelled as far as the first ranges of the Rockies, but having collected several thousand specimens, as many as he could carry, he decided to return to England. His vivid Latin imagination is responsible for a number of names of the geographical features near the east gate—Grotto Mountain, Wind Mountain, Lac des Arches, the Fairholme Range, etc.

The Bow River is running swiftly now, its ice green water shot with violet shadows, hurrying over boulders and curving about under shadowy banks.

Ahead, to the southwest, the four impressive peaks of the Massive Range stand out boldly -Mt. Massive (7,990 ft.), nearest the river, with Mts. Bourgeau and Brett and Pilot Mountain almost in a line behind. Mt. Brett (9,790 ft.) commemorates the first physician at Banff, head of the first Sanitarium and later Lieut. Governor of Alberta. Beyond it is Pilot Mountain (9,690 ft.), standing out so prominently in the valley that it became a landmark for all early travellers, hence its name.

On the right the mountains are sharply up-ended, 177.5 rising in craggy precipices on which the forest can find little footing. The road runs close to the bare wall of Mt. Cory, an impressive mass rising to 9,194 ft. Midway up its face there is a dark opening which looks like an immense window, but is the entrance to a natural chamber fifty feet high at its mouth and nearly one hundred and fifty feet long. Members of the Calgary and Banff Masonic Lodges once held a meeting in this cave, 1500 feet above the valley floor. This is often

Mileage from Jasper

called Hole-in-the-Wall mountain, though there is another peak with that name up Healy Creek with an opening twenty or thirty feet wide right through the mountain about 200 feet below the crest.

- 13.3 Across the river the valley of Redearth Creek, a 172.2 tributary of the Bow, can be seen opening southwest to the Divide. At its head, visible from the road, rises the great snowy helmet of Mt. Ball (10,865 ft.), one of the great peaks along the Divide. Lying at its feet are the lovely Shadow Lakes, noted both for their beauty and their fine Cutthroat trout. A good trail leads 11 miles up the valley to the foot of Mt. Ball.
 - Ahead one catches a thrilling first glimpse of Mt. 171.5 Eisenhower, lifting its striking eastern tower high above the trees, then the road runs into a beautiful park-like woods, known as the Hillsdale Hills, a favorite haunt of deer.

Across the valley the dark mass of Pilot Mountain, with its great ledges and buttresses of rock, dominates the valley, standing out so prominently that it is easy to see how it became a guide for travellers up and down the valley. On the north the grey wall of the Sawback Range rises to a sharp cockscomb, so sharp that it looks as if it might have been cut out of wallboard for a stage set. Its highest peak is Mt. Ishbel (9,540 ft.), named in honour of Miss Ishbel Macdonald, eldest daughter of the Rt. Hon. Ramsay Macdonald, former Prime Minister of Great Britain, who visited the Rockies with her father during his occupancy of 10 Downing Street.

- 15.9 On the left side of the road there is a Public Campsite 169.6 equipped with stoves, running water, fuel, and other conveniences for the use of visitors, without charge. On the north is the Johnston Canyon Bungalow Camp with cabins and tea room.
- Nearby, Johnston Creek, one of the main tributaries 169.5 of the Bow on the north side, flows out to join the river. The creek takes its rise thirty miles away in an interesting mountain region at the foot of Mt. Avens. Half a mile from its mouth it carves its way through a remarkable rock canyon, in places over 100 feet deep.

Mileage from Banff Mileage from Jasper

A trail leads up to the canyon, and it is worth taking the short walk to examine this striking example of the eroding force of water. Flying bridges cross the chasm, whose narrow walls are in places only 20 feet apart and at the upper end there is a charming waterfall.

- 17 The green meadows along the river are a favorite 168.5 feeding ground for moose, which are often seen here.
- 18.7 This was the site of an early mining camp known as 166.8 "Silver City". The discovery of silver ore on Castle Mountain and copper in Copper Mountain across the valley brought hundreds of hopeful prospectors during the winter of 1886-87, who built log cabins here and sat down to wait for spring. They started out to make "Silver City" a roaring, wide-open town like similar mining towns in Montana, but one day two red-coated "Mounties" quietly drifted in and took up residence. As usual their mere presence was enough. After that law and order prevailed and everything quieted down without trouble.

The ore, however, was not found in sufficient quantities to be profitable, and the 1500 settlers finally moved on to more promising fields.

19.2 Public Campground to the right.

166.3

19.7 Junction with the Banff-Windermere Highway 165.8

National Park Highway from the Columbia Valley.

This road enters Kootenay National Park at Radium Hot Springs, traversing the park for sixty miles and crossing the Great Divide by the Vermilion Pass. Here it enters the Banff Park and in 9.7 miles reaches the present junction.

Looking up Altrude Valley, the route of its descent, the two striking peaks which stand as guardians of the Vermilion Pass—Boom Mountain (9,047 ft.) and Storm Mountain (10,372 ft.)—can be seen on the Divide. Storm Mountain is what is known as a weather-breeder, and is very often surrounded by dark clouds.

21 Majestic Mt. Eisenhower now completely dominates 164.5 the scene. "Castle Mountain" Hector named it with happy inspiration, a description so apt that it was at

once adopted. In January, 1946, however, during the visit to Canada of General Dwight D. Eisenhower, great leader of the Allied forces during the war, the Canadian Government renamed the mountain in his honor, "as a lasting expression of the high admiration and esteem" in which he was held by the people of Canada.

The mountain is one of the most distinctively architectural peaks in the Canadian Rockies. Its sheer rocky walls, rising majestically a mile high into the blue, upon a base eleven miles long, its symmetrical summit, and great frontal tower which commands the valley for miles, suggest those impregnable fortresses of the Dark Ages in which scattered tribes took refuge from their enemies. Buttresses, turrets, even what seem to be rocky doors high on its side, complete the resemblance, and it takes little stretch of the imagination to believe that it might still be the home of the Titan gods of the mountains. For untold years it has stood guard over the Bow Valley, and its ancient quartzites and limestones were laid down in the far-off Cambrian seas.

There is a legend among the Indians that the mountain is the home of the Chinook Wind. "Many, many moons ago," they say, "a great battle of the Winds took place in the mountains. The fierce North Wind had seen the lovely South Wind playing with her little daughter and swept down to carry her off. The strong West Wind flew to their assistance, but in the struggle the little Chinook was blinded by the beating wings. Since she could no longer see to fly she was given a home in Castle Mountain, and when on Spring nights a warm wind blows out to the prairies melting the snow, they say it is the little blind Chinook stealing down to look for her lost mother and leaving spring behind her wherever she goes."

From the east the great front tower appears the highest point of the mountain. In reality the actual summit (9,390 ft.), fifty feet higher, rises from the main mass. The great southern face seen from the road forms, too, only a part of the actual mountain. Photographs taken from the air show that it is shaped like a gigantic horseshoe, only one prong of which is visible.

Ralph Edwards, writing in the Canadian Geographical

Journal, says: "The northwestern end of Mt. Eisenhower looks down upon the valley of Baker Creek, where its rock wall takes a sudden drop and curves towards the north. It again rises in a ridge trending parallel to the main body of the mountain, though of considerably less height. Mt. Eisenhower has, therefore, in plan the form of a gigantic horizontal U, with its curved portion facing to the west and the terminals of the northern and southern arms pointing eastward. In between the main and subsidiary ranges lies a glorious alpine valley at an altitude of nearly 7,000 feet, at the head of which is a beautiful mountain tarn. From this charming lake issues a splashing streamlet, which plunges to the floor of the alpine meadow in a shimmering cascade. It is doubtful whether this mountain lake has been seen by a score of white men since the first explorer set foot in the area; it lies in enchanting loneliness—one more instance of the many lovely scenes which are so close to the beaten path, yet whose very existence is not even suspected by the hordes of hurrying sightseers."

Geologists believe that Mt. Eisenhower was once joined to Copper Mountain, six miles away across the valley. "There is little doubt", says Prof. A. P. Coleman, "that the innocent-looking Bow and its tributaries, helped by weather, frost, and glaciers, have actually destroyed and swept away to build up the plains the many cubic miles of rock that once joined the two peaks."

The mountain is interesting geologically because it marks the line between the younger formations of the eastern section of the park and those to the west. These show by the almost horizontal lines of their strata that they must have been lifted almost straight in the air as one jacks up a car from beneath. Eastwards the long folds broke and immense masses of rock were pushed out over the underlying beds, and for several miles over what was then the edge of the Plains, like great blocks of ice in a spring thaw, forming the sloping, sharp-crested mountains characteristic of the eastern ranges. The ranges to the west were lifted higher, and as they received more precipitation several thousand feet have been worn down from their crests, leaving the ancient foundations

Mileage Mileage Banff

exposed. At Castle Mountain station the oldest formation in the Rockies—that of the Pre-Cambrian age is exposed.

from

Jasper

- Mt. Bident—As the car skirts the long base of Mt. 160.5 25 Eisenhower the view across the valley grows more impressive. We are coming now into the region of the great peaks. Almost opposite, over on the Divide, rises Mt. Bident (10,109 ft.), so-called because its twin peaks resemble a double tooth. Farther west are the snowcrowned heads of some of the Ten Peaks, that tremendous circle of rugged mountains, all over ten thousand feet in height, which stand guard at the head of lovely Moraine Lake.
- 28.5 The road crosses Baker Creek, which takes its rise at 157 the foot of Mt. Skoki, a favorite winter ski-ing objective. When the water is clear this stream provides good trout fishing, as do also the Baker Lakes about ten miles up. A good trail leads up the valley, and return to the highway can be made either by way of Corral Creek or the Pipestone River.

The Sawback Range has gone off now to the north, and the peak occupying the north side of the valley is Protection Mountain (8,899 ft.), which stands like a rearguard fortress to Castle Mountain.

Mt. Temple—Now the rare clear air of the snowpeaks 154.1 31.4 begins to tingle in one's nostrils. Over on the Divide white heads are rising majestically, while directly across the valley soars the beautiful shining pyramid of Mt. Temple (11,626 ft.), a mountain so impressive in its serenity and majesty that if it were the country's only possession it might be venerated like Fujiyama.

Although Mt. Temple is the highest peak south of the railway, with the exception of Mt. Assiniboine, it is hard to realize its tremendous proportions from the valley. These are better grasped from the Saddleback above Lake Louise or from the motor road to Moraine Lake, which can be seen winding around a shoulder of the mountain about 1000 feet up. But viewed from any angle, Mt. Temple is one of the most impressively beautiful peaks in the mountains. Sometimes its great

Mileage Mileage from from Jasper Jasper

head will remain hidden for days in the clouds; often it will shine out above them with a splendor and purity that seem to belong to another world. Its rocky buttresses and sheer wall, rising to the symmetrical head, make it another example of Nature's superb architecture in the Rockies, a temple not made with hands, but shaped by that great architect of Nature which is always at work creating and destroying his forms.

To the east of Mt. Temple there is a glimpse of the slender spires of Pinnacle Mountain, and over on the Divide the white heads of several of the lofty Ten Peaks.

Although Mt. Temple's name fits it so perfectly, the peak really commemorates the visit to the Canadian Rockies in 1884 of Sir Richard Temple, then President of the Economic and Statistics section of the British Association for the Advancement of Science.

- The road crosses Corral Creek, another swiftly flowing 151.5 stream coming in from the north. The name goes back to the days of the construction of the railway when workmen went on strike here, demanding fresh meat in their diet. It was a demand difficult in those days to satisfy, but contractors finally arranged to have four steers driven in over the long 75-mile trail from Morley, in the foothills, so that work could go on. A corral for the animals was built on the edge of the creek.
- 35.8 Mt. Temple View Bungalow Camp; Gas Station. 149.7
- 36.4 The road crosses the Pipestone River, the largest 149.1 northern tributary of the Bow. The stream derives its name from deposits of fine-grained, blue-grey argillite found along its shores, and used by the Indians for the making of their ceremonial pipes. This river leads up to the Pipestone Pass and over to the Clearwater country, the best big game hunting region outside park boundaries within easy reach.
- 36.5 Lake Louise Junction—Here the Banff-Jasper Highway turns north to begin its 150-mile intramontane journey to Jasper. The Trans-Canada Highway crosses the Bow, passing Lake Louise station. There is a small settlement here with a post-office and hotel, and a little farther on there is a public campsite. Three miles from

the junction is the famous Lake Louise, and all who have never seen it and many of those who have will turn aside for a visit to this exquisite spot.

Lake Louise

"When God made Guinevere", wrote Cabell, "he used both hands". One thinks he did no less at Lake Louise. It is one of those rare places where beauty reaches such absolute perfection that it startles even the dullest of us into reverent wonder. The landscape, in fact, is so perfect that it does not seem quite real. Paintings and photographs have made it familiar the world over, but no picture can prepare one for the living intensity of the lake's colour, which is never the same for two minutes in succession. It lies shimmering and alive in a horseshoe setting of green forest and lofty peaks, with the dazzling brilliance of Victoria Glacier for a magnificent In early summer the waters are a clear backdrop. turquoise, holding the reflected glacier like a moonstone A little later the tones deepen to in their depths. sapphire, undershot by diagonal reflections of emerald and gold. One of its loveliest hours is the early morning before the life of the hotel is astir. During the chill of the night a heavy mist will gather above the lake. As the light strengthens this will lift in veil after veil, disclosing the dawn-washed freshness of the lake, and go curling up the sides of the mountains like chiffon rags.

But every hour of the day brings a new beauty. Full sunlight, twilight, moonlight, even the rare grey day, weave their own transformations. The lake has as many moods as a woman, each one a surprise.

Lake Louise lies in a hanging valley, scooped out by an ancient glacier, which once discharged its ice into the immense glacier which filled the Bow Valley. The water is very deep and cold, even in midsummer seldom more than twenty degrees above freezing. The glaciers at the foot of the lake falling from Mts. Victoria and Lefroy feed it with their melting waters through a little stream which cuts across the moraine at their feet.

On the left the green slopes of Mt. Fairview (9,085 ft.) rise abruptly from the shore, with The Saddle (7,993 ft.),

Haddo Peak (10,083 ft.), and Mt. Aberdeen (10,250 ft.) continuing the line. At the foot of the lake is the noble snow-crowned head of Mt. Lefroy (11,280 ft.), with a curiously shaped peak resembling a bishop's hat and called The Mitre (9,480 ft.) standing out in front. Still farther west, on the Divide, is glorious Mt. Victoria (11,363 ft.), the loftiest peak of the region, with its great glacier hanging from rocky ledges like a dazzling curtain. A trail leads up the glacier, but owing to the prevalence of avalanches it is unsafe to cross the ice except at certain hours of the day and always unsafe without the services of a guide.

The western shore is walled by Mt. Whyte (9,786 ft.), with the green slopes of Mt. St. Piran (8,691 ft.) closing the line. At the head of the lake there is a low, rounded peak known as the Beehive, whose tawny rock adds one more splash of color to the lovely scene.

The region immediately surrounding Lake Louise is rich in Alpine features and one of the most compact in the Rockies. Within the radius of a dozen miles there are half a dozen beautiful valleys and nearly twice as many exquisite lakes. In rocky basins several hundred feet above Lake Louise lie the two little "Lakes in the Clouds"—Mirror and Agnes. Across the Divide are Lakes Oesa and McArthur, and the fairy-tinted Lake O'Hara, which rivals Louise in beauty. Nine miles away by motor road is Moraine Lake, in the majestic valley of the Ten Peaks, with the lovely Consolation Lakes in a hanging valley just above. At the foot of Mt. Temple is little Lake Annette, blue as a wild gentian, while at the foot of Wenkchemna Pass lies Eiffel Lake, and to the west, at the back of Mt. St. Piran, is the small tarn called Minewakun.

The surrounding district is a particularly rich one for the alpine climber. Temple, Lefroy, and Victoria are a challenge to the most experienced. The sheer precipices of the Ten Peaks present major problems in rock climbing, while for the novice there are close at hand the easy climbs up St. Piran and Mt. Fairview. Those who prefer to climb on pony-back can ride up to the tea-house at the Lakes-in-the-Clouds, which com-

MILE BY MILE . . .

mands a magnificent panoramic view, or up to the saddle of Mt. Fairview.

To the motorist who is going on up the Banff-Jasper Highway the latter is particularly interesting. Below, spread out for miles, is the wide, green valley of the Bow, with the river lying like a bit of torn cellophane on its floor. To the north rises the splendid mass of Mt. Hector, with the snowfields glistening over on the Divide. That narrow cleft in the forest leading up from the railway is the highway rising to the Bow Pass, and beyond lie the Mistaya and North Saskatchewan valleys leading to the Columbia Icefields, and on to Jasper.



Peaks Near Lake Louise From Highway

Mile By Mile

SECOND SECTION. UPPER BOW VALLEY. —
LAKE LOUISE JUNCTION TO BOW PASS. 26.5 MILES.



Crowfoot Glacier

Mileage from Banff 39.8 Mileage from Jasper

T Lake Louise Junction the railway and the 149 Trans-Canada Highway turn west towards the Kickinghorse Pass, while the Banff-Jasper Highway branches off to run almost straight north

towards the Bow Pass. The Bow River, which has its source in Bow Lake, will still be its companion, though the stream soon disappears from sight in the thick woods to the left.

39.6 Three miles up the valley and only a few feet from 145.7 the west side of the road there is a small green lake known as Lake Herbert. While it is not noticeable for its beauty it bears a very good reputation as a

Mileage from Jasper

successful fishing spot and it is noted for its fine Cutthroat trout.

- Now the road begins its slow and gentle climb up to 143.5 the Bow Pass, still 21 miles away. In that distance an ascent of 1,700 feet will be made, although the rise is so gradual that one is scarcely conscious of the grade.
- To the east rugged Mt. Hector (11,135 ft.), the most 141.5 westerly peak of the Slate Range, lifts its towering head high above the trees. This fine peak was named in honor of Dr. (later Sir) James Hector, discoverer of both the Vermilion and Kickinghorse Passes, two of the main keys to the opening up of the Rockies, who came up this way after his severe accident on the western side of the Divide. The mountain is a worthy monument to his indomitable courage and endurance.

The peak was first climbed by Philip Abbot—victim of the fatal mountaineering accident on Mt. Lefroy the following year—Professor Fay, and Mr. C. S. Thompson, all members of the Appalachian Club. They reported that the ascent was almost a "walk-up climb", involving no great hardships "except such as are familiar to every bricklayer's apprentice", but they were enthusiastic about the far-reaching view it affords of the Bow Valley, visible as far as Mt. Eisenhower, the great snow-crowned peaks near Moraine Lake and Lake Louise, and on the west, the magnificent wall of the Waputiks.

On the south and west the mountain rises in precipitous slopes to a great fortress-like summit, which, if a site for a second Berchtesgaden were ever needed in Canada, would offer a perfect location. From the northern end of the peak—the route of ascent—the view commands the Pipestone Valley leading to the Pipestone Pass and a tributary valley leading to Dolomite Pass. The Pipestone is one of the most rugged passes in the mountains, over 8,000 feet high and 10 miles long, windswept and storm-swept at all seasons and blocked by snow for almost three-fourths of the year. A few deformed and dwarfed trees, perhaps 18 inches at base and from three to four feet high, lean like bent old men away from the wintry winds and in their gnarled branches "few birds sing". Yet in summer this pass is one of the

THE BANFF-JASPER HIGHWAY

Mileage from Banff

Mileage from Jasper

most brilliant wild flower gardens in the Rockies. The Dolomite Pass is also rugged, with great rock slides, which have tumbled in a rocky chaos from the heights above. Of this view Mr. Abbot wrote: "In the single element of savage desolation-unrelieved, monotonous, boundless, and complete—I have never seen anything to equal it, and I do not expect to see anything which will excel it".

44.5 Westward the long wall of the Waputik escarpment 141 is seen along the Divide, rising above thickly wooded slopes, and with a thick cap of ice and snow glistening against the intense blue sky. This great range, "a bit of the coping of the continent thinned down until it is no more than the fine edge of a wedge", and forming on its western side the precipitous wall of the Yoho Valley, extends in an almost unbroken line from Mt. Daly to Howse Peak, a distance of over forty miles. And it is ice-crowned all the way, one great field merging into another and spilling down on both slopes of the Divide in numerous glaciers which give rise to some of the loveliest features of the landscapes.

On the west the Daly Glacier forms the source of the Takakkaw Falls, one of the chief beauties of the Yoho Valley, while others on the east feed Hector, Bow, Peyto, and Chephren Lakes.

Almost in a line west from Mt. Hector is Mt. Balfour (10,741 ft.), the highest peak of the Waputiks. Trolltinder", it was originally called by Jean Habel, the discoverer of the Yoho Valley, because its splintered tower resembles the famous mountain of that name in Norway, on whose summit, according to local legends, a wedding party was turned into stone pillars by evil magic.

North of Mt. Balfour there is a sharp break in the wall through which the great tongue of the Balfour Glacier sweeps down to the valley, falling at last in a cascade of melting waters to form one of the chief sources of Hector Lake.

The name "Waputik" is from the Stoney Indian word for the white Rocky Mountain goat, once found in great

Mileage from Jasper

numbers on these mountains. The bright green alplands visible below timber line are carpeted with myriads of wild flowers.

48.5 A sign points to a Lookout Point and it is well worth 137 while alighting here for a few moments if only to look back over the wide Bow Valley, whose majestic proportions can be better grasped from here, and across to the shining crests of Mt. Temple, the Ten Peaks, and Mts. Victoria and Lefroy. Seen from this point the mountains seem to form a compact group, like a council meeting of "big chiefs", with heads covered with down, among the Indians the sign of friendship.

Below, on the west side of the road, almost entirely surrounded by pine forests, lies lovely Hector Lake, its waters of veridian green harmonizing with the greenish boles of the trees in the foreground. The lake is three and a half miles long and about three-quarters of a mile wide. Both Lake Hector and two lovely little lakes set above it, fed by the same stream, are stocked with trout, but since they cannot be reached from the road without fording the Bow River, sportsmen usually take the trail in from Bow Lake. Turquoise Lake, the highest of the three, is an exquisite little gem—"a joy forever", wrote the Rev. C. L. Noyes, member of the exploring party of alpinists who discovered it in 1897. Lake Margaret, another little jewel, with waters of a clear sapphire blue, lies several hundred feet below.

Pulpit Peak (8,940 ft.)—At the southern end of Hector Lake there is a curiously shaped mountain which David Thompson called Pulpit Peak, because of a group of strange rock pillars near the summit. Seen from the valley they look like sculptured figures, as if a company of priests had been turned to stone while addressing an audience below.

The road curves through green pine woods, climbing easily but steadily up towards the pass. As a greater altitude is attained, the pines become noticeably smaller and the poplars disappear.

52.8 Mosquito Creek—The road crosses a little stream 132.7 which the Indians call "No-See-Ums Creek", but which

Mileage from Banff

Mileage from Jasner

is officially known as Mosquito Creek. "No sec-ums" is the Indians' apt name for the black fly, a pest which appears in late September, but it is hard to say why this particular creek should have acquired an evil reputation, since, according to old-timers, neither of these exasperating insects are found in numbers along its shores. It is true that this stretch of the trail between here and Bow Lake was always "hard-going". It abounded in muskeg and bull-dog flies, both of which maddened the horses and severely tried the tempers of the men. The creek is a run-off from a glacier on Mt. Molar (9,924 ft.), a peculiar tooth-shaped peak northeast of Mt. Hector, in the Slate Range.

53 Bow Peak (9,194 ft.).

132.5

The massive promontory now looming ahead is Bow Peak, the culminating point of a spur which runs east from the Waputiks. On the south the peak puts a protecting arm about Lake Hector, while on the north it forms a retaining wall for the southern end of lovely Bow Lake. The mountain is a conspicuous landmark for miles up and down the valley and is sometimes visible from Wilcox Pass, sixty miles to the north.

- Now the road turns towards the west and the sharp 130.5 towers of Dolomite Peak (9,828 ft.) come into view on the right. Dolomitic formations—crystalline carbonate of lime and carbonate of magnesium, named for the geologist Dolomicu—are rare in the Rockies. The rock weathers into splintered and jagged crests with slender rock towers which are usually very difficult to climb. A pony trail leads off from the road around Dolomite Peak and up to the two lovely little lakes, "Helen and Margaret", on to the Dolomite Pass and thence down Dolomite Creek to the Siffleur River beyond park boundaries.
- 57 Crowfoot Glacier—To the west, sprawled along the 128.5 rocky ledges of Bow Peak, lies one of the most curious glaciers in the Rockies. The ice spreads out into three separate tongues, like the claws of a bird's foot. At one time the icefall probably covered most of the face of the mountain, but like most glaciers in the Rockies, the Crowfoot Glacier is melting faster than it advances and

shrinking in volume. A few years ago part of the south claw, which formerly reached clear to the valley, broke away, but enough still remains to explain the name.

Mileage

60 **Bow Lake.** 125.5

The diminished river is again close to the road and ahead one catches the first glimpse of its birthplace, lovely Bow Lake. This picturesque body of water lies at an altitude of 6,420 feet—750 feet higher than Lake Louise and more than 1,800 feet above Banff—and is fed directly from the icefields of the Divide. The lake, which is about 3½ miles long and nearly a mile wide at its greatest width, is shaped like a bent arm, with the shoulder at its western end and the wrist tapering to the south. It can be seen only in part from the highway. To appreciate its full beauty one must go down to the edge of the lake itself.

The eastern shore is bordered by grassy meadows, the north and west by the massive walls of Mt. Thompson (10,119 ft.). Midway the mountain is hollowed out into a great armchair, and in the centre of the arc, cradled between the two arms, lies the shining Bow Glacier, which descends from the Wapta Icefield on the Divide. Twenty years ago the Bow Glacier hung to the valley. It now ends at a ledge half-way up, over which its melting waters plunge in a beautiful waterfall into the green forest below. The southern end of the lake is more narrow, broken by picturesque islands, and it feeds out into the small stream which forms the headwaters of the Bow River which the highway has been following for sixty miles.

Since the lake faces east it catches all day the full glory of the sun, and if the air be still, as it so often is here close to the high wall of the Divide, the slim, lance-pointed jackpines, the dazzling snows of the glacier, and the rhythmic slopes of Mt. Thompson, which sweep down in bands of old red, grey, and olive green, seem painted upon a sheet of turquoise.

One of the great attractions of the lake is that it is as yet completely unspoiled. In spite of the many visitors which the road has brought to its shores, it still

keeps its air of primitive loneliness. If you take a boat and slip around the first bend, out of sight of the roadway, there will be nothing to remind you of the outside world. The far-away bass of the waterfall supports but does not break the silence. Even the distant thunder of an avalanche, which sets the echoes answering, is too far off to disturb the peace.

But at twilight the lake comes to life. Beaver and marten swim out into it from the little stream that runs through the meadows. Deer, moose, sometimes a few elk, come down to its shores for their evening drink, as their ancestors have done for hundreds of years. Once in a while a black bear may undertake a nocturnal exploration or a few big snowshoe rabbits meet to exchange the time of day. And since the wild things know they will not be molested they will probably come near enough to allow you a good view if you go about it discreetly.

Num-Ti-Gah Lodge

On the east shore of the lake, facing the glacier, is the delightful chalet known as "Num-Ti-Gah Lodge.." operated by the pioneer guide and outfitter, Jimmy Simpson, and his clever and capable wife. Mr. Simpson pitched his tent on the shores of Bow Lake fifty years ago and has made it his base ever since. Thirty years ago he packed up the fittings for his first log cabin through the swamps and muskegs along the thirty-mile trail from Lake Louise. Today the "Lodge" consists of a spacious chalet with modern comforts which can accommodate from thirty to forty guests. It is built of peeled logs from the nearby forest and melts into the landscape as naturally as a beaver's lodge. Around its great stone fireplaces in the evening, climbers, scientists, artists, sportsmen and travellers, many of whose names are famous in the outside world, gather in old clothes and swap bear, fish, and adventure stories, which lose nothing in the telling, wander about, or examine the very fine collection of animal paintings by Carl Rungius which hang upon the walls.

Guides, ponies and boats can be procured at the Lodge, and there are a dozen expeditions which can be

Mileage from Jasper

made using it as base. By taking a boat one can row over to the mouth of the stream which carries the melting waters of the Bow Glacier down to the lake. Once, as early photographs show, the glacier fell the whole way to the valley; now it ends at a rocky ledge two thirds of the way up, giving rise to a stream which plunges in a magnificent fall to the valley, where it cuts its way through a dark gorge with walls so close together that in places one can step across. At one place a massive fallen boulder, perhaps thirty feet long, has become wedged between the two sides forming a natural bridge. The sides of the canyon have been fantastically worn and carved into pockets and arches by the turbulent water which foams down in numerous cascades with black intervening pools.

The Bow Glacier forms a direct pathway up to the snows of the Wapta Icefield on the Great Divide, but its surface is so broken that a guide is required. On the west slope a trail leads down to the head of the Yoho Valley.

Even if one has only half a day to spare one can ride up to the flower meadows of the Bow Pass. The ground is so open that no trail is necessary and one can ride at will through what in July is in reality "a sea of wild flowers", enchanting in their fragrance, color and luxuriance.

Other trails lead back to Lakes Hector, Turquoise, and Margaret, and on to the Balfour Glacier; east to the Dolomite Pass and over to the rich hunting region along the Clearwater beyond Park boundaries; and ahead to the Peyto Lookout and the charming lakes in the Mistaya Valley.

63 **Bow Pass**—Two miles north of Num-ti-gah Lodge the 122.5 highway reaches the broad open meadows of the Bow Pass (Alt. 6,785 ft.), the height of land between the waters flowing south to the Bow and north to the North Saskatchewan. The road rises almost imperceptibly to the actual summit, with Cirque Peak (9,768 ft.) on the right and a long ridge running out from Mt. Thompson on the left. In the marshy meadows, within a few feet of each other, two little streams take their rise, descend-

Mileage Mileage from from Jasper

ing on opposite slopes to form part of the headwaters of the North and the South Saskatchewan Rivers. The northerly one joins the Mistaya and flows out to the plains by the North Branch; the southerly one enters the Bow, one of the chief tributaries of the South Saskatchewan. Three hundred and fifty miles away the two branches unite, bringing together once more the streams which rise here within a few feet of each other, and flow out on the strong flood of the mighty Saskatchewan into Hudson Bay.

63.5 Half a mile beyond the summit, on the left, there is 122 a public camp and picnic ground, supplied with the usual stove, shelter, and fuel, and at Mile 64 there is a park warden's cabin with an emergency telephone.

Peyto Lookout—From the summit of the Pass a trail leads west half a mile to a lookout point which commands one of the loveliest views in the mountains. From an outjutting platform of rock, one thousand feet above, you look down the narrow trench of the Mistaya Valley, which stretches away, green and beautiful, between splendid peaks, for over twenty miles. Set in the floor of the valley are half a dozen lakes—the superb gem of Peyto Lake just below and beyond, the three long sheets of water into which the Mistaya widens, the Mistaya and the Upper and Lower Waterfowl Lakes. On the west, set in deep forest and overshadowed by dark cliffs, are Cirque and Chephren Lakes, with a small unnamed lake at the foot of the Kaufmann Peaks far beyond. Looking back, dazzling white against the sky line, are the broad snows of the Wapta Icefield, with the Peyto Glacier sweeping down from them about the feet of Mt. Baker, Trapper Peak, and Mistaya Mountain.

The backbone of the continent is here only about four miles away and the great rocky buttresses which support it can be seen extending in an unbroken line as far as the gabled Howse Peak. The peak immediately north of Mistaya Mountain is Barbette Mountain (10,080 ft.), which sends down a fine glacier about Mt. Patterson (10,490 ft.). Between Mt. Patterson and its northern neighbor, Ebon Peak, descends the Capricorn Glacier

MILE BY MILE . . .

to Capricorn Lake, and beyond, clustered close together, are Aries Peak, Stairway Peak, Midway Peak and Mt. Synge, with Howse Peak (10,800 ft.) towering over a thousand feet above them at the end of the line.

On the eastern side bold, craggy mountains, each over 10,000 feet, wall in the valley as far as the eye can see and twisting through the green floor of the valley like a skein of tangled silk, winds the Mistaya River.

The Banff - Jasper Highway .

THIRD SECTION. DOWN THE MISTAYA. BOW PASS TO THE NORTH SASKATCHEWAN. 23.5 MILES.



Mt. Chephren

Mileage from Banff 63

Mileage

ROM Bow Pass the highway drops down to 122.5 the long trench valley, occupied successively by the four rivers—the Mistaya, the North Saskatchewan, the Sunwapta, and the Athabaskawhich it will follow to Jasper. The descent of a thou-

sand feet is easily made in a few miles, and the road runs out to the thickly forested floor of the valley, with the Mistaya River, already a considerable stream, to the west.

"Mistaya" is the Indian word for grizzly bear, and

(90)

Mileage from Jasper

tor many years the river was known as Bear Creek and appears as such in nearly all early maps and travel records. Other writers called it the Little Fork of the North Saskatchewan, the Howse River being known as the Middle Fork, and the North Saskatchewan as the North Fork. In 1901 the Geographic Board of Canada adopted the more euphonious and less confusing Indian name.

of the Peyto Glacier, its white purity gleaming above the foreground of dark pines with a kind of ethereal radiance. Wherever there is a gap in the wall of the Divide a glacier is forced down to the valley, and often little puffs of cloud driven up the west slope can be seen

drifting through to the east side above them.

The fine mountain standing out prominently across 118 67.5 the valley is Mt. Patterson (10,490 ft.), named in honor of a former president of the Alpine Club of Canada. The eastern side of the valley is guarded by three rocky masses, which commemorate an expedition undertaken in 1898 by four members of the Appalachian Club—the Rev. C. L. Noves, Rev. H. P. Nichols, and Messrs. C. S. Thompson and G. M. Weed. With Ralph Edwards as guide they travelled up the Pipestone Valley from Lake Louise to the Pipestone Pass, went down the Siffleur and turned off, up an unknown valley. Finding themselves soon in a country which completely puzzled them, Mr. Noves decided to climb the prominent peak, now to the right of the highway, to take their bearings. From this vantage point he perceived a valley leading south to a narrow pass. The next day they followed it and, descending a terrific rock slide, reached the pass, to which they gave the name of "Dolomite". The two little lakes to the west of the pass they called "Helen" and "Margaret", after Mr. Nichol's two daughters. Noyes also gave the name of "Observation Peak" to the mountain he had climbed the previous day.

69.5 Mt. Weed (10,100 ft.) — This fine mountain, with 116 rugged pinkish walls, directly north of Observation Peak, and Mt. Noyes (10,049 ft.), a little to the northeast, were named in honor of two other members of the same party.

Mileage from Banff

Mileage from

To the north of Mt. Patterson, hidden away in the 115.5 deeply forested valley, lie three of the charming lakes which were visible from the Peyto Lookout, but which cannot be seen from the road owing to the intervening trees. The first of these is the Mistaya Lake, a lovely sheet of water nearly three miles long, lying at the foot of Stairway Peak. About three-quarters of a mile from its southern end the Mistaya River enters the lake, flowing out at its northern end.

Cirque Lake, the second of the three, is a charming little mountain tarn, less than a mile long, lying in a deep rocky basin hollowed out by an ancient glacier, between Stairway Peak and Mt. Synge.

Loveliest of the trio, perhaps, is Chephren Lake, which lies under the dark walls of Mt. Chephren, with its clear blue waters deeply shadowed by the great tower overhead.

- The road is running now along the floor of the 112.5 Mistaya Valley through fine stands of pine and spruce which throw diagonal bands of light and shadow across the way. Across the valley the last peaks of the Waputik Range stand crowded together along the Great Divide. The backbone of the Continent is here only four miles away; at Mt. Synge it is only a little more than three miles, but at Howse Peak, immediately north, the Divide suddenly turns west and then south, doubling about the great Mummery group of mountains before it resumes its northern course, then fifteen miles from the highway.
- The Mistaya has divided into several channels and 111.5 now widens out into the Upper Waterfowl Lake. The road runs close to the shore and cameras should be held ready, for the lake is a favorite feeding ground for moose. They are frequently seen feeding among the water plants, sometimes within a hundred yards of the shore, and if the car is brought quietly to a stop they will probably remain without moving long enough for camera lovers to get a picture.

The lakes derive their name from the numerous waterfowl which make their homes in the marshy meadows on the floor of the valley. Harlequin ducks,

Mileage from Jasper

Mallards, and pintails may be seen swimming with their broods, while along the shores you may see a few sandpipers or plover, a nervously bobbing water ousel, or a blue Belted kingfisher searching for food.

- Howse Peak (10,800 ft.)—The striking peak west of 111.5 Upper Waterfowl Lake is Howse Peak, on its western side commanding Howse Pass. Its gabled head and fine glacier, which drains into Chephren Lake, stand out even more sharply on the return journey, forming a striking feature for many miles. The first ascent was made by Messrs. Collic, Stutfield, Weed and Woolley, in 1902. They reported it "a simple but laborious climb with a delightful view". The summit is formed of an enormous snow cornice, which runs along the ridge for a great distance and overhangs terrific precipices on the side next the Mistaya River.
- 74.5 Between the Upper and Lower Waterfowl Lakes a small stream known as Noyes Creek flows down between Mt. Noyes and Mt. Weed to join the Mistaya. Looking west from the bridge over the creek to Mt. Synge, a strange little tower of rock, which the Swiss call a "gendarme", stands out prominently and suggests the figure of an Indian woman sitting down to rest with her papoose on her back, or, as some suggest, the well-known sculpture by Rodin of the "Thinker". The old ford across the Mistaya was near the mouth of the creek and a trail leads over to Lake Chephren.
- than its sister lake, measuring a little over a mile in length and about half a mile in width. Its shores are more rocky and the clear green of its waters forms a perfect mirror for the majestic mass of Mt. Chephren, whose dark, purplish walls and imposing tower, wall it in to the west. Looking down the lake there is a fine view of the sheer precipices of the Kaufmann Peaks and Mt. Sarbach, which form a majestic wall for the west side of the valley of the Mistaya practically to the mouth of the river.
- 76 Mt. Chephren (10,710 ft.)—Even in this region of 109.5 magnificent peaks, Mt. Chephren stands out with a supreme majesty and beauty all its own. Among all

Mileage from Jasper

mountain lovers it will always hold high place. dark frontal tower of purplish rock rounded to a beehive, its immense, deeply carved buttresses, the symmetrical bands of darker rock and dazzling snow which crown its summit give it an individuality which stamps itself at once on the memory. A luxuriant forest throws its cloak of living green about its feet, but, above, the great walls rise in naked precipices for nearly a mile. Lying upon the main mass of the mountain is an immensely thick ice cap which sweeps down around the great tower in a pure white snow saddle like a white scarf flung over its shoulders. The impressiveness of the mountain is increased by the fact that it is what is known as a "weather-breeder". Dark clouds wreathe and unwreathe themselves continually about its summit, dragging their deep shadows across its sombre face, or smoking up from the valley in long trailing mists which gather into white puffs about its head and float off into the blue.

The name is derived from the well-known pyramid in Egypt.

77.5 Mt. Murchison (10,930 ft.)—The immense craggy mass now walling the road to the east is Mt. Murchison, the loftiest peak to the east of the Mistaya. It was named by Sir Jas. Hector after his friend, Sir Roderick Murchison, then Director of the Geological Survey of Great Britain. The mountain has a base six miles long, extending all the way to the North Saskatchewan River and standing out on the return journey with great impressiveness. From the valley the walls rise to rocky pinnacles and shattered towers like the ruins of a titanic cathedral. On the northeast face there is one of the few icefields found on the east side of the road, which drains through Murchison Creek to the North Saskatchewan.

Not far from the top of the mountain there is a curious fragment of very ancient history. It consists of a small group of what appear to be petrified tree trunks, sliced off about one foot from the ground, perhaps by the action of ice a thousand centuries ago. Whether these were part of a once living forest in whose boughs strange birds sang and underneath whose shade uncouth animals now unknown may have wandered, or

Mileage from Mileage from Jasper

even bits of some gigantic seaweed which may have waved on the floor of the antediluvian sea, geologists have not decided, but their history is undoubtedly very ancient.

80 Kaufmann Peaks and Mt. Sarbach

105.5

Across the valley to the west are three fine peaks named after the Swiss guides who accompanied the first alpine climbers into this region. The two first, both over ten thousand feet, commemorate Hans and Kristian Kaufmann, who led many first climbs in the Rockies. Mt. Sarbach was named after Peter Sarbach, the Swiss guide who accompanied Stutfield and Collie on their memorable expedition to the Columbia Icefield. Its great pinkish walls rise to 10,260 feet and there is a beautiful hanging glacier on its southern face. Its lower slopes are made of loose rock extremely difficult to climb, for a single careless step can dislodge tons of rock; the upper are of darker and harder limestone.

Looking over the shoulder of Mt. Sarbach there is often a thrilling glimpse of the snowy spire of Mt. Forbes (11,902 ft.), the fifth highest peak of the Rockies, closely resembling Mt. Matterhorn in Switzerland in the sheerness of its line, and the most outstanding peak south of the Columbia Icefields.

Both river and highway now swing to the west, curving about the base of Mt. Murchison, through fine original timber. The old trail to the Saskatchewan Crossing branches west about Mile 83, running across a low shoulder of Mt. Sarbach to the river.

The Mistaya Canyon -Two miles from its mouth the 101.5 Mistaya gathers its forces together into a deep channel and plunges out of sight into what is one of the most remarkable canyons to be seen along the way. The floor is so steep that the water rushes down with terrific force between narrow walls in places two hundred feet high, throwing up clouds of spray, and swirling into deep potholes carved in the sides. The canyon can be reached by a short walk through the woods by a trail leading to the right, and as an example of what the persistent force of water can do acting through long centuries against the hard resistance of rock, is well worth seeing.

Mileage from Banff Grossing Mileage from Jasper 86.5 Saskatchewan Crossing 99

Throughout the last five miles the road has been dropping steadily until now the altitude is only slightly higher than that of Banff. Running across a broad gravel bench it reaches a wide river flowing out to the east. This is the historic North Saskatchewan River, or "North Fork", as it was formerly called.

From its source in the Saskatchewan Glacier—the largest of the great ice tongues projected from the Columbia Icefield—the North Saskatchewan flows south, taking in several tributaries, the most important of which are the Alexandra River and Arctomys Creek. Twenty-three miles from its source it meets the Howse River—formerly known as the "Middle Fork"—flowing northeast from Howse Pass, and, joining forces, the combined streams turn almost at right angles to the east. A little west of the bridge the Mistaya joins them, and the now wide river sweeps east through a broad open valley to the outer ranges and so to the plains.

It is easy to see how this great valley became one of the earliest routes into the mountains. The buffalo probably discovered it first, perhaps travelling in from the prairies in a dry season when its grassy meadows offered more attractive food. Buffalo tracks and bleached bones and skulls were seen here as late as 1890. The Indians probably followed the buffalo and, turning up Howse River, discovered the pass. As David Thompson had won their confidence they revealed its existence to him, and during the years 1807 to 1810 he crossed and re-crossed the Divide by this route several times. In the late autumn of 1810, however, the Piegans, who had their hunting grounds along the river, becoming enraged at the sale of firearms by the whites to their hereditary enemies the Blackfeet, closed the pass and Thompson and his men narrowly escaped with their lives. Hearing of another pass to the north Thompson travelled to the Athabaska and the Whirlpool, discovering the gap, now the Athabaska Pass, which became the established route of the fur trade for half a century.

Along the river a few miles to the east was the famous Indian camping ground on the Kootenav Plains, a

sheltered spot inside the mountains at which each year a sort of trading fair took place and to which hundreds of Indians from both side of the main Rockies travelled for the exchange of horses and goods. In 1858 Hector came in from the prairies, past Kootenay Plains and Saskatchewan Crossing and, turning up the Howse River, went on as far as the Howse Pass, which he recommended as a suitable route for a military road. It was also considered as one of the most practical routes for the C.P.R., and had it not been for other considerations, largely political, this valley instead of the Bow might have carried the traffic of a continent. The descent of the west slope was by way of the Blaeberry River, which enters the Columbia near Donald, B.C., on the Big Bend Highway.

An early alpine climber fifty years ago wrote as follows of the scenery at this spot where the three rivers meet:

"Taken altogether the place seems an ideal one for a tourist centre; and we may fairly anticipate that at the mouth of Bear Creek (the Mistaya) will be the Chamounix or Grindelwald of the Canadian Alps in days to come when the remoter peaks and valleys of this beautiful region are made accessible to the outside world and the new mountain playground of the American continent becomes no longer a dream but a reality."

The Howse River valley is broad and open, flanked by marshes and sandy terraces. Some natural salt outcrops have made it a favorite with game from time immemorial. A few miles up from the mouth there are two turquoise coloured lakes, known as the Glacier Lakes, jammed at the outlet by logs which have formed a sort of natural bridge and which sheep and goats have long used in their travels to and fro. Dominating the region to the north as one goes up is the magnificent head of Mt. Forbes, with its curious but lower replica which stands out in front. The Howse Valley is the route to the fine Freshfield group of peaks and to the Freshfield and Mons Icefields.

In the days of the pack trains "Saskatchewan Crossing" bore the reputation of being the most difficult spot on the long trail route from Lake Louise to Jasper. It

involved the fording of the three rivers, of which the Mistaya was by all odds the most hazardous. This bright and turbulent stream sweeps down in a swift flood over a bed strewn with boulders which are continually rolling about with the force of the current. In low water the passage could be made without great difficulty, but a sudden rain or a few warm days which would bring down the melting snows would swell the river to thrice its volume and many a luckless pony, losing his footing, precipitated his rider into the swirling waters. Trail parties were often held up here for days waiting for the floods to subside.

The fording of the Howse was easy, but since the west bank of the Saskatchewan afforded little footing for a trail, that river had also to be crossed a mile or so from its mouth and the trail continued north under the ramparts of Mt. Wilson, where the highway goes today, as far as the mouth of the Alexandra River. Here the Saskatchewan was crossed again and the Alexandra was followed as far as its junction with the Castleguard River, a valley which leads directly to the fringe of the Columbia Icefield. Thence the pack trains travelled down the broad face of the Saskatchewan Glacier — a unique experience still possible today—and across the Saskatchewan River again to the Sunwapta Pass. This route not only afforded the finest approach to the Columbia Icefield, but it avoided the rigours of the "Big Hill", an ascent which taxed the endurance of both men and ponies.



Mile By Mile . . .

FOURTH SECTION.

UP THE NORTH SASKATCHEWAN.

SASKATCHEWAN CROSSING TO THE COLUMBIA ICEFIELD. 33 MILES.



On the Big Hill

Mileage from Banff 86.5

HE highway crosses the North Saskatchewan 99 River and climbs an outlying ridge of Mt. Wilson, a great castellated mass which walls in the eastern side of the valley for the next 11

As the road rises there is a fine view of Mt. Murchison with its shining glacier, invisible from the Mistaya Valley, now showing at its northeast corner. Across the valley, in the angle between the Mistaya and the Howse, the snowy triangle of Howse Peak dominates the Divide, here making an abrupt turn to the southeast.

Mileage from Jasper

Mileage from Banff	!				fro	eage om sper
	Saskatchewan	River	Bungalow	Camp		98

In one mile the road reaches the cabins and tea-room of the "Saskatchewan River Bungalow Camp". There is a gas-station here and a refreshment booth where meals, light refreshments, and supplies can be obtained. This camp supplies a good base from which the rich surrounding region may be explored.

89.5 Public Campground

Two miles farther north, a government campground, with the usual facilities, is situated on the eastern side of the road. From this point there is a particularly fine view of the dark mass of Mt. Murchison.

90 Survey Peak (8,791 ft.)

95.5

96

Across the valley, in the angle formed by the Howse and North Saskatchewan Rivers, is Survey Peak, important chiefly for the fine views it affords of three valleys to the south and of the lake-studded valley of Arctomys Creek to the north. This creek, one of the important tributaries of the North Saskatchewan, is born of the snows of the Lyell Icefield on the summit of the Divide and carries down the melting waters of the many glaciers which descend from five-peaked Mt. Lyell.

Mt. Wilson (10,631 ft.)

Now the road runs close to the frowning wall of Mt. Wilson, one of the most imposing peaks of the eastern side. The mountain was named by Prof. J. Norman Collie, in honour of Tom Wilson, one of the well-known guides and outfitters at Banff, who had his wintering quarters at Kootenay Plains.

Mt. Wilson is interesting geologically because it is a "writing-desk" mountain reversed. In the outer ranges, in such typical peaks as Mt. Rundle, for instance, at Banff, the dip of the strata is towards the east. Here it dips to the west, with the back of the writing desk turned to the road. Although invisible from the highway the bare, rocky summit of Mt. Wilson is crowned with ice and there is a long glacier on its east face. This hidden ice is the source of numerous waterfalls which tumble in slender threads to the valley.

Mileage from Banff Mileage from Jasper

The first ascent was made by Sir Jas. Outram in 1902 from Pinto Pass. Writing of the panorama spread out from the summit, he says:

"The view was one of the most delightful of the Besides the new country now displayed to the north and east, the panorama furnished a complete resumé of our entire trip, and no other mountain could have offered so perfect an ideal for a consummation of the summer's mountaineering. Mt. Temple, in the far distant south, marked our starting point; then Bow Pass led to the long narrow trench of the South Fork (the Mistaya), and the eve followed up the Middle Fork (the Howse River) to Glacier Lake and Kaufmann Peak, Mt. Freshfield and magnificent Mt. Forbes; the North Fork (the N. Saskatchewan), glistening at our feet, 6,000 feet below, was traced mile by mile to its farthest source at the head of the Alexandra Valley, hemmed in by Mts. Lyell, Alexandra, Consolation, Turret, Bryce, and finally Columbia".... "The vast sea of mountains, in all their majesty of might, the attendant valleys, filled with treasures of most perfect beauty, glacier and forest depth, sparkling stream and flower-decked glade, have graven with imperishable strokes upon my memory a record that will be a never-ceasing joy through life".

97 **Mt. Amery** (10,940 ft.)

88.5

The outstanding mountain on the west side is Mt. Amery, named in honour of the Hon. Leopold Amery, former Secretary of State for India in Great Britain, who visited Canada shortly before the outbreak of the second great war. This majestic peak, which just failed of getting into the 11,000-foot class, is built of massive tiers of rock lying almost horizontally like the walls of a gigantic fortress. The great frontal tower, which must once have been much higher, has apparently been sliced off, and three thousand feet down, flanked by enormous buttresses, is the deserted cradle of what must once have been an extensive glacier. Behind the great tower the whole top of the mountain, flat as a roof, is covered with an immense cap of ice several hundred feet thick, while every ledge is outlined with ice as if

Mileage from Banff

Mileage from Jasper

inlaid with marble. Small glaciers descend on all sides and just above the cirque a row of them, hanging perpendicularly, suggest the carved cloister pillars of a cathedral.

Near the summit there is a slender obelisk of rock which is known as "Cleopatra's Needle", because of its resemblance to the well-known obelisk brought from Egypt and now standing on the Thames Embankment in London.

Rising behind Mt. Amery are three fine glacier-hung peaks, standing close together in a compact group. They are Mt. Wilberval (10.420 ft.), Mt. Monchy (10.530 ft.) and Mt. Hodge (10,550 ft.).

The Graveyard Flats—For the last few miles the river 86.5 99 has been widening out and now flows sluggishly through the immense deposits of rock-flour, or silt, which it has carried down from the heights, meandering in several channels as if it had lost its way. At Mile 99 there is a particularly desolate region known as the "Graveyard Flats". The great number of bleached logs, stumps, and miscellaneous flotsam strewn about would make this somewhat gruesome name appropriate today, but in reality the name goes back to the days of the early explorers who bestowed it. This spot was then the site of one of the most important Indian camps in the moun-Here four hunting trails met the trail up the Alexandra Valley to Thompson Pass; the trail up Howse River to Howse Pass; the trail up Nigel Creek and over Wilcox Pass to the Maligne region; and that up Cataract Creek to Pinto Lake and on to the Cline River, where there was a well-beaten trail south to the Bow Valley.

Hunting parties returning from the Divide would camp here to skin, scrape, and prepare their furs so that they could be more easily carried. In consequence there were to be seen great piles of bleached bones, animal heads, and hair. The camp was in use for many years, and it is said that when white big game hunters came, those who were unsuccessful often salvaged a good specimen from the pile and brought it back as their own trophy.

99 Junction with the Alexandra River

86.5

Across the valley the Alexandra River, which takes

Mileage from Banff Mileage from Jasper

its rise in the Alexandra Glacier at the foot of the Divide, flows out between Mt. Saskatchewan and Mt. Amery to join the North Saskatchewan. The first white man to report its existence was Mr. Walter D. Wilcox, who, in 1896, looked down upon it from the summit of Mt. Saskatchewan. In 1900 Mr. C. S. Thompson, pioneer alpinist of the Appalachian Club, explored the valley as far as its junction with the Castleguard, and turning off here discovered the pass between Mt. Bryce and Watchman Peak, which now bears his name. In 1902 Sir Ias. Outram came out from England and fitted out an expedition, with Jimmy Simpson and Fred Stephens as packers and Christian Kaufmann as alpine guide, for the purpose of exploring the entire mountain system which forms the headwaters of the North Saskatchewan. Sir James made first ascents of a number of the principal peaks and succeeded in clearing up most of the geographical problems of the region. Both the Alexandra and the Castleguard Valleys lead into great scenery, the first, to the magnificently glaciated peaks, Mt. Lvell and Mt. Alexandra: the second, through alpine meadows of enchanting loveliness, to the fringe of the Columbia Icefield.

99.2 Near the mouth of Cataract Creek there is a Warden's 86.3 cabin with an emergency telephone.

A trail leads up Cataract Creek to a lovely falls and on over Sunset Pass to one of the loveliest little lakes in the mountains, called Pinto Lake. This exquisite little mountain tarn lies in a perfect amphitheatre with mountain walls rising on three sides to 7,000 and 8,000 feet. Draining into the lake is an enormous spring, forty feet wide, of cold delicious water. The Indians regarded it as one of the best fishing spots in the region and came here annually, especially for its Great Lake trout, which they cooked in a smudge of sphagnum moss. They revealed its presence to Dr. A. P. Coleman, who visited it on his expedition to Fortress Lake and who wrote in admiration: "If it were not so far from the railway this romantic pool among the woods and hills should be as attractive to mountain lovers as Lake Louise. So far it has been visited by few white men."

Though it is still true that few white men have seen

Mileage from Banff Mileage from Jasper

it, Pinto Lake is now only about 8 miles from the highway and an adventurous traveller could even reach it on foot.

102 Mt. Coleman (10,262 ft.)

83.5

The road now slips into deep pine woods, running between fine stands of spruce and pine. Their dark green luxuriance affords a rest to the eyes and one has time to watch for some of the shy wild flowers that grow at their feet.

The rugged mountain which towers now on the east side of the valley is Mt. Coleman, one more of the monumental masses which line this side of the highway. The mountain was named in honour of Dr. A. P. Coleman, the eminent geologist, whose memorable expeditions in search of Mts. Brown and Hooker added so much to the knowledge of the region through which the highway passes. Like Mt. Wilson, Mt. Coleman has a base over ten miles long and has a glacier on its northeast side.

102.5 Public campground with the usual conveniences for 83 picnickers.

Across the valley to the west rises the prominent head of Mt. Saskatchewan, the great southeastern buttress of the Columbia Icefield. The mountain is distinctive both in color and outline, with great horizontal belts of pinkish quartzites, interspersed with broad bands of darker rock, stretching from end to end in splendid cliffs. The rocky ridges are broken by many towers and splintered into pinnacles and needles, one of which, standing out boldly on the northeast shoulder, is known as "The Lighthouse". On its northern side the great Saskatchewan Glacier, largest of the huge ice tentacles which descend from the Columbia Icefield, forms the source of the North Saskatchewan River. The glacier, 15 miles long and 2½ wide, cannot be seen from the road owing to an intervening ridge.

The road crosses Coleman Creek, which flows down 82.5 from Coleman Glacier near the summit of the peak, and near its mouth carves its way through a typical canyon before flowing out to join the main river.

Mileage from Banff
107 The valley is narrowing now and great walls shut it 78.5 in on both sides. At Tumble Creek a tangle of forest clothes both banks of the Saskatchewan, now a shallow turbulent river, rushing down over a boulder-strewn bed. Tumble Creek, aptly named, plunges down over the face of a bare rock wall, which rises almost directly from the highway. The stream takes its rise in a high valley between Mt. Coleman and Cirrus Mountain, but part of its water appears to be derived from an underground source.

In another mile the road begins its long ascent to the 77.5 Sunwapta Pass, up what was known in the old days as the "Big Hill". The abrupt rise of over a thousand feet was hard on both horses and men. Riders had to dismount, and packs lightened and distributed as much as possible before beginning the ascent. By the time the top was reached all were considerably winded.

The construction of this section of the highway was the most difficult problem of the Banff end of the road. It involved the building of several bridges and extensive rock cutting and blasting. To add to the difficulties this section lay at the end of the Banff Park end of the road, over a hundred miles from the head engineering office at Banff and seventy from the railway. Dynamite, tools, food, supplies and equipment had all to be brought in over a rough trail, and accidents and breakdowns were numerous and unavoidable. To maintain workcamps and keep equipment in repair in a mountain wilderness a hundred miles from anywhere, and at an altitude where the winter temperatures often dropped to thirty degrees below zero and the snowfall was six feet or more, was no easy task, though as the road sweeps up today in broad spirals, which never exceed a grade of more than eight per cent, it is hard to realize the difficulties that have been surmounted.

The North Saskatchewan now disappears behind the low ridge of rock which hides both the upper portion of the river and its glacier source from view and the road climbs easily through deep woods along the lower slopes of Mt. Cirrus.

110.5 About two and a half miles up it crosses Nigel Creek, 75

Mileage Mileage from from Jasper

chief upper tributary of the North Saskatchewan. This beautiful clear stream flows down through a deep, narrow ravine from a source near Nigel Pass. The main trail to the Brazeau River and Lake and the rich hunting region beyond lay up this creck and over Nigel Pass. Not far from its mouth the river takes a spectacular leap of 600 feet in a waterfall of such flying grace and beauty that it suggested to Mrs. Schaefler, who first saw it in 1908, the leap of a panther. The falls can be reached in a few minutes by a walk up the valley, and are well worth a visit.

The road turns sharply west, runs through extensive rock cuttings, crosses and re-crosses Nigel Creek and then turns again towards the north. Now the snow-topped heights of Mt. Athabaska come into view. The 71.5 highway runs across a low shoulder of this great mountain and out into the broad open meadows which form the Sunwapta Pass.

116.5 Entrance to Jasper Park

At the summit of the pass (6,675 ft.)—the height of land between the waters flowing on the south by way of Hudson Bay to the Atlantic and on the north by way of the Athabaska to the Arctic —the road leaves the Banff National Park and enters the vast reserve of 4,200 square miles which forms the Jasper National Park.

69

67

118.5 Public Campground

Two miles north, situated in grassy meadows, with Nigel Pass directly to the north, is a public campground.

The road glides gently around the eastern peak of Mt. Athabaska, the Columbia Icefield Chalet is seen ahead, and in a few moments the broad tongue of the great Athabaska Glacier comes into view, about a quarter of a mile away. Above it, stretching away for miles in all directions, lie the snowy wastes of the Columbia Icefields.

Mile by Mile

FIFTH SECTION.

THE COLUMBIA ICEFIELD, ITS MOUNTAINS AND GLACIERS.



The Athabaska Glacier

ALF a century ago the very existence of this great ice region was unknown. It lay in that unmapped, unexplored region between the Howse and the Athabaska Passes, the "great lone land", which even the Indians do not seem to have visited. Its discovery was made by two English alpinists—J. Norman Collie and Hugh Stutfield—who had come out to Canada filled with enthusiasm to make first climbs in this fresh field of almost unknown peaks. In 1898, fired like so many others, by the rumour of two 16,000-

foot peaks—Mts. Brown and Hooker, near the Athabaska Pass—they penetrated the Alexandra Valley, hoping to find them at its head. But no peaks of that height could be found. Disappointed, they climbed the shoulder of Mt. Athabaska and were astonished to see this great icefield stretching away below. In his delightful book, "Climbs and Explorations in the Canadian Rockies", Collie wrote:

"A new world was spread at our feet; to the westward stretched a vast icefield probably never seen before by human eye, and surrounded by entirely unknown, unnamed, and unclimbed peaks. From its vast expanse of snows the Saskatchewan Glacier takes its rise, and it also supplies the headwaters of the Athabaska; while far away to the west, bending over in those unknown valleys glowing with the evening light, the level snows stretched to finally melt and flow down more than one channel into the Columbia River, and thence to the Pacific Ocean."

Collie's party crossed the icefield and climbed Mt. Columbia and the Snow Dome. To the northwest they saw the great 12,000-foot peak at the edge of the icefield, which was later named Mt. Clemenceau, but saw nothing resembling the far-famed Mts. Brown and Hooker. That myth was exploded by Dr. A. P. Coleman. But the story which Collie and Stutfield brought back to the world was almost equally exciting to alpinists and their maps cleared up much of the fog which had so long enveloped this rich region.

The Athabaska Glacier

The Athabaska Glacier, which faces the highway, can scarcely be called beautiful. There is undoubtedly something chill and forbidding about it, especially on grey days. And here, as so often elsewhere, Nature, it must be admitted, has been a bit careless and untidy in her world-making. The great piles of rock scrapings, the heaped up stones and gravel left at its foot and sides in the course of its long retreat, give it a desolate look that repels those who like a neat beauty of their landscape.

Yet it has a unique interest, even a fascination which grows rather than diminishes the longer you see it. For this frozen, apparently inert mass has a kind of life of its own. It moves, not very quickly, but a few inches each day, wriggling downwards in its rocky bed, though too slowly for the eye to catch its movement. But if you drive a spike into its surface and mark the spot directly opposite on the rock, and come back in a week, you will find that your spike has travelled downward For glacier ice has two contradictory several feet. characters. It is at once a heavy, viscous substance which can flow like pitch or "molasses in January", and a highly brittle one like glass. The great pressure upon the icefield forces the ice out and it flows down over the rocky ledges in three successive icefalls, yet because of its brittle nature, its surface is broken by deep crevasses and those rough fissures which the Swiss call "seracs", a name derived from the coarse curds which are formed in the making of an inferior kind of Savoyan cheese. Some of these cracks go down hundreds of feet and you could drop a motor car into their yawning depths.

The glacier descends in three icefalls, the first of which is the most spectacular. The ice formations here are most unusual, with enormous, deeply scored cliffs of ice, splintered ice pinnacles, and fearsome crevasses; no novice should attempt to explore it without a guide.

What makes a Glacier move? This is a question very frequently asked by observant travellers. The answer given by scientists is this: "Glacier ice is granular and when these grains are subjected to the pressure of a great thickness of ice, they move over one another very slightly. Under pressure from its neighbor each grain melts a little at the point of contact. The water formed moves to one side where the pressure is not so great, and there freezes again. The effect of the slight melting of countless grains is cumulative and all the minute movements from the edge to the centre, added together, cause the glacier as a whole to move forward very slowly, but more rapidly at the borders than in the centre. The water from the melting at the edges of the grains also helps to lubricate the ice and facilitate motion. A glacier

also moves by the shearing of one layer over another. It is this continuous freezing and thawing which permits the ice to move like a plastic substance and to retain at the same time the properties of a solid."

But, like most glaciers in the Rockies, it also shrinks by melting, and this loss is greater than its forward motion, so that it is, as one can see for oneself by the well-marked lines of moraine at its foot and sides, slowly retreating up the valley and shrinking in width. The glacier's snout, says Dr. Coleman, "is the balancing point" between the forces of advance and retreat. On any warm summer day little streams begin to run over the surface of the glacier, finding a way down some of the numerous crevasses to the subterranean stream, roaring and foaming about often in what is called a "moulin", or mill. Sometimes large boulders, which have protected the ice immediately beneath, will stand up as "glacier tables", while deep cracks, or "crevasses", will open to immense depths.

On warm afternoons the sub-glacial stream which flows out at the tip of the glacier, increases greatly in volume. It is fascinating to watch this water, imprisoned who knows how long in the ice, coming out into life. For this is the birth of the Sunwapta River, the most important of the two branches which form the headwaters of the great Athabaska River. Some of these drops trickling out from the green depths of the ice cave will flow finally by way of the Great Slave and the greater Mackenzie into the far distant Arctic Ocean, there, perhaps, to become ice again. For the moment they seem in no hurry to begin their journey. They eddy about in a small lake, milky with rock flour, on which small blocks of ice float about like miniature icebergs. Another stream, carrying water from some of the hanging glaciers on Mt. Athabaska, comes rushing down to join them, cutting its way through the terminal moraine. Then the combined stream sweeps close to the foot of the Snow Dome and, taking in the melting waters from the Dome glacier as well, disappears from sight in the deep woods which clothe the valley.

Mt. Athabaska

In the hearts of all lovers of the Canadian Rockies

Mt. Athabaska must always hold high place. Though it lacks both the height and the symmetry of Mt. Columbia, seen from the Athabaska Valley, or the white purity of Mt. Clemenceau, the splendor of its three great peaks, hung with such a dazzling array of glaciers, with the great Saskatchewan Glacier sweeping for fifteen miles along its southern base and the Athabaska Glacier for six and a half miles on its northern, gives it an outstanding place even in that great company of noble peaks which surround the Columbia Icefield. tically the whole of the mountain is above timber line. Vegetation crawls to its feet and dies. Above it, the mountain walls rise for four thousand feet of stark rock and ice. The east peak near the road wears an immense cap of ice, which hangs at an angle that seems to defv the laws of gravitation. Its north side is hollowed out into a great "arm-chair" completely filled with ice, and extending down almost to the valley. Between each pair of peaks and from every shoulder hang other glaciers, whiter than the slow moving clouds which float above them, and paint them with an ever-changing pattern of drifting indigo shadows.

The mountain can be seen for miles down the Sunwapta Valley, and under almost every light it stands out with a beauty and grandeur that fixes it forever in the memory of every traveller.

The Columbia Icefield

Everyone who can sit on a horse should take a half-day and ride up at least as far as the shoulder of Mt. Athabaska for a close-up view of the great icefield. Better still is it to ride over to the Castleguard Valley and climb up Mt. Castleguard, from whose summit a glorious panoramic view can be obtained, returning by a trail down the ice of the Saskatchewan Glacier. The trip requires three days, with two nights spent under canvas in the beautiful Castleguard Valley.

Mt. Castleguard is an easy ascent, within the powers of anyone who is able-bodied, and standing on its summit you are almost on the ridgepole of the continent. Spread out below and away for twenty-five miles in all directions is what must surely be one of the greatest

alpine landscapes in the world. Lewis Freeman, who undertook an expedition to photograph it, writes in his *Roof of the Rockies*:

"Possibly lacking the sheer breath-taking wonder of the first sight of Kinchinjunga's snows from Darjeeling, the view from the summit of Castleguard is still one of the great mountain panoramas of the world. Set on the southern rim of the Columbia Icefields, with no other peak encroaching on its domain for many miles, there are no masking barriers close at hand to cut off the view in any direction.

"Not only are almost all the great peaks of the Canadian Rockies system notched into the splendid panorama, but also many of those of the Selkirk and Gold Ranges, far beyond the purple-shadowed depths that mark the great gorge of the Columbia River."

The icefield, itself, is a vast expanse of unrelieved white like a prairie landscape in winter, stretching away to the horizon for miles to the north and west. Like the prairie, its surface is gently undulating, sloping up in the centre to a curious, snow-covered peak, which stands up like a white tent or pointed knob in the middle of the field. This is the Snow Dome, the hydrographic centre of the Rockies, a three-ocean watershed from which flow streams to the three oceans. This vast expanse, without a shred of green to break its prevailing whiteness, suggests the "pale desolation" of an Arctic landscape and presents a vivid picture of conditions prevailing across the northern half of the continent forty thousand years ago. The field lies at an altitude of ten thousand feet, and the surrounding peaks which rise above it for a thousand or two thousand feet more are without vegetation. Few forms of life can exist at these heights. Sometimes the "red snow" (protococcus nivalis) may stain the edges of the snow, or the indomitable black flea hop about in the sunny hours, otherwise the ice is as lifeless as the desert. Travellers crossing the field are sometimes surprised to find moths and beetles lying in numbers, torpid with cold, on the surface of the snow. But these have come only by acci-They are inhabitants of the warm valleys of

British Columbia, carried up over the Divide by warm air currents and on to the ice, where they soon die of cold.

Peaks Surrounding the Icefield

Giant peaks form a majestic Guard of Honour about the field and support it on their massive shoulders. Dominating the northern border is noble Mt. Columbia, the "Queen of the Rockies", and the second loftiest peak. This glorious mountain, however, is seen at its greatest impressiveness from the Athabaska Valley to the north. Across the icefield it rises in a white pyramid with a strange black cross of white outlined near its summit. The peak immediately west of Mt. Columbia is Mt. King Edward, with Chaba Peak, also on the Divide, a little to the northwest. Across the Divide is the majestic head of Mt. Clemenceau, another twelve thousand-foot peak, best seen from Fortress Lake, with a great icefield of its own, which is separated from the Columbia Field by the valley of Tsar Creek.

Directly north of Mt. Columbia are three fine peaks, standing almost in a line. Farthest north is Mt. Alberta, beautifully hung with glaciers; next, the glittering head of the North Twin—the third loftiest summit—and its smaller sister, the South Twin. Facing the Sunwapta Valley is Mt. Kitchener, with Stutfield Peak, Mt. Woolley and Diadem Peak as outlying bastions beyond.

At the southeast corner is the great bulk of Mt. Saskatchewan, with Mt. Castleguard midway of the southern border, and Mt. Bryce, across the Divide, at the southwest edge of the field.

In order of altitude the peaks are:

Feet	Feet
Mt. Columbia 12,294	Mt. Lyell 11,495
The North Twin 12,055	Mt. Athabaska 11,452
Mt. Clemenceau 12,001	Mt. King Edward 11,400
Mt. Forbes 11,902	Snow Dome 11,340
Mt. Alberta 11,874	Mt. Stutfield 11,320
South Twin 11,675	Mt. Alexandra 11,214
Mt. Bryce 11,507	Mt. Woolley 11,170
Mt. Kitchen 11,500	Mt. Fryatt 11,026

Such a company of noble peaks cannot be found elsewhere in the Rockies or any alpine region so rich in ice phenomena and at the same time so accessible. It is not difficult to cross the icefield, though blue glasses and warm clothing and footwear are advised. The snow that falls at these altitudes is dry and powdery, composed of exquisite, six-rayed crystals, feathery in form and containing a great deal of air. Under the pressure of the increasing load much of this air is expelled, and as a result of successive meltings and freezings, a coarse granular snow is formed which hardens into bluish ice. Alpinists call this surface the névé, using the Swiss term for which there is no English equivalent.

The precipitation is very heavy, for the icefield acts as a great condenser for the warm, moisture-laden winds which blow over from the Pacific and the annual snowfall may be thirty feet or more. But since it requires about ten feet of loose snow to produce one of ice, that may mean that the depth of the ice is increased by only three or four feet each year. And always the field is draining away through the glaciers which are squeezed out through the gaps between the peaks, and flowing down to the warm valleys, where they melt, to become the source of rivers.

The Columbia Icefield has been compared to a "stockily-built octupus with ice tentacles hanging down on all sides", and the description is very apt. There are more than thirty of these tentacles, or glaciers, and together with the main field they make up an area of 150 square miles of ice—a great refrigerating plant, or blood bank of moisture, which is fed out little by little, like plasma, through its melting waters, into the veins of the distant wheatlands. In fact the existence of this icefield plays its part in the economic life of hundreds of thousands of square miles of territory.

"Mother of Rivers" it has been well called, for from it flow streams which form the headwaters of two of the greatest rivers of the Canadian west—the Athabaska and the North Saskatchewan—while on the west the Tsar and Bush Creeks flow to the Columbia and help to swell the volume of waters which finally flow over the Couleé Dam.

Some geologists believe that there has been an icefield here since the time of the first Ice Age, perhaps a million years ago. They think that while the lower valleys may have been entirely cleared during the warm ages between the successive advances of the ice sheets, it is possible that here, above the line of perpetual snow, some ice remained. How long will this great icefield last? That is a question perhaps even geologists cannot answer. But probably for many thousands of years to come.

This icy desolation has moments of beauty all its own. If you are so fortunate as to see it at sunrise or sunset you may behold an enchanting transformation. Then the field becomes a "bowl of colours". As the peaks light up one after another the snow reflects their radiance. Great waves of delicate gold, rose and violet flood the white expanse and flow down over the eastern glaciers, tinting the whole scene so magically that it has to be seen to be believed.

The Columbia Icefield Chalet

A few yards from the highway, directly facing the glacier, stands the comfortable mountain inn known as the Columbia Icefield Chalet. Here, in the heart of the mountain wilderness, sixty miles from anywhere, one finds those amenities demanded by most modern travellers—good food, good beds, and a hot bath. Mr. Jack Brewster, the well-known mountain guide and outfitter, who, for twenty years before the building of the road, led the annual pack train over the long trail from Banff to Jasper and return, and his capable and charming wife, act as host and hostess, and out of their long mountain experience are ready to help visitors with interested and trustworthy advice.

Rising behind the Chalet are miles of mountain meadows which are veritable wild flower gardens and where one can ride for hours without a trail. From these heights Mt. Athabaska, the great glacier, and the resplendent icefall of Dome Glacier and the dark head of Mt. Kitchener, softened by distance, combine to make a picture of unforgetable beauty. Another, even finer view may be obtained by taking the old pony caravan trail which branches off the highway at the Sunwapta

Pass, and climbing up through the flower meadows to Wilcox Pass (7,760 ft.). This was formerly the high point of the long three-weeks' trek from Banff to Jasper. The trip can be made from the Chalet up to and across the pass and down the valley of Tangle Creek to the Highway again in one day.

Ski-ing

Each year the Chalet is more and more becoming a centre for summer ski-ing. Both Mt. Kitchener and the Snow Dome can be easily climbed from the south side, and it is a unique and exhilarating experience to sweep down their snowy slopes and out onto the back of the great icefield. There is a ski instructor at the Chalet, and even novices may join a party and enjoy a day's sport on the heights above the clouds.

Alpine Climbing

The region seems destined also to become one of the most popular centres for alpine climbing in the future. Nowhere else in the Rockies can one find so many peaks of over 11,000 feet within such a short radius. While the giants have all been conquered, there are still unclimbed, even unnamed, peaks of many degrees of difficulty within comparatively easy reach. The great Lyell Group, with its fine icefield and many glaciers, just south of Mt. Castleguard, is but little known, as well as the heavily glaciated region from Chaba Peak along the Divide as far as the Athabaska Pass. The services of Swiss guides can be procured through the Chalet by writing in advance.

Mile by Mile

SIXTH SECTION. DOWN THE SUNWAPTA.

COLUMBIA ICEFIELD TO SUNWAPTA FALLS.

31 MILES.



Sunwapta Falls

Mileage from Banff 119.5

Mileage from Jasper

EAVING the Columbia Icefield Chalet the 66 road begins to follow the Sunwapta, which soon justifies its Stoney Indian name, meaning "turbulent water". Two miles to the north

Wilcox Peak thrusts a determined shoulder across the valley completely barring a way through. The Sunwapta solves the problem by carving out a deep canyon and plunging under. The pack trains climbed over the peak by way of Wilcox Pass. Since the west side of the river afforded no satisfactory footing for a road and Wilcox Pass was impracticable, the highway engineers decided to spiral up and around the obstruction. The road begins a long slow climb and at the summit swings out to the verge of the rocky wall, below which the river can be heard boiling through the deep canyon. From the Lookout Point there is a fine view of noble Mt. Athabaska, the Snow Dome, crowned with an enormous cap of bluish ice, and of its splendid icefall and glacier. It is four miles from the tip of the ice tongue to the field above.

The dark mountain immediately north of the Snow

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Dome is Mt. Kitchener (11,599 ft.), named in honour of the great British general, hero of Khartoum and director of British strategy during the first world war. Like another great leader "no man knows his sepulchre and no man knows his grave", but this noble monument in a part of the Empire he had never visited may perpetuate his name long after war itself has been discarded as a means for settling international difficulties.

Mt. Kitchener is the first of four great peaks, all over 11,000 feet, which now rise on the west side of the valley and form giant buttresses upholding the Columbia Icefields to the north. They are Mt. Stutfield (11,320 ft.), Mt. Woolley (11,170 ft.), and Diadem Peak (11,060 ft.).

Stutfield Peak was named for Hugh Stutfield, one of the discoverers of the Columbia Icefield. Behind it and a little to the south is the great North Twin, which sends down glaciers to feed the headwaters of the west branch of the Athabaska River, which takes its rise at the foot of Mt. Columbia and flows down through an almost parallel valley, uniting with the Sunwapta about thirty miles farther north.

124 From the Viewpoint the road curves down to the 61.5 valley and runs for long restful miles through the forest and along the river flats. The river, too, forgets that it is in a hurry and spreads out into a wide bed, becoming at times so heavily choked with silt that it scarcely seems to be moving at all.

On the east three tumultuous streams plunge madly down three parallel valleys to join the Sunwapta. The Indians used all three as routes to and from the Brazeau 125.5 River and out to the Plains. The trail over Wilcox Pass leads down the first—Tangle Creek—so-called from the tangle of deadfall and forest which blocked the way of the first pack trains which came down it. Just before reaching the mouth of the creek the trail branches off south to the highway to avoid a gorge and fall, joining it about a mile south of the Tangle Creek Bridge (124.5).

MILE BY MILE . . .

Beauty Creek.

Mileage from Banff On the east the mountains lose shapeliness and become long cockscomb ridges, tilted slightly west. The first, known as Tangle Ridge, extends from Tangle Creek to

129.5 **Beauty Creek**—The second lovely stream to join the Sunwapta flows out characteristically through a fine gorge, falling over a ledge of rock in a charming waterfall a little east of the highway, known as Stanley Falls.

From the bridge over the creek there is a good view across the valley of the two fine peaks—Mt. Woolley and Diadem Peak. The first was named by Collie after a fellow climber, Herman Woolley, of Caucasian and Swiss mountaineering fame. Diadem owes its name to the shining crown of ice it wears upon its symmetrical head. From high up long lines of ice hang like ropes of diamonds to a deep cirque below.

130 Sunwapta Peak (10,875 ft.)—The last clearly defined 55.5 peak on the east side for many miles is the lofty Sunwapta Peak which rises north of Beauty Creek and fills the east side of the valley as far as Jonas Creek.

Behind these peaks, though invisible from the valley in spite of its greater height, is Mt. Alberta (11,874 ft.), the regal peak which forms the great central buttress of the Columbia Icefield on the north. It was named in honour of H.R.H. the Princess Louise, wife of the Marquis of Lorne, Governor General of Canada 1878-83.

135.5 Approach to it is by way of the Athabaska Valley. Jonas Creek, called after an Indian chief of that name, enters on the east. On the south, just before reaching the bridge, there is a pleasantly situated public campsite with shelter, etc.

137.5 About two miles farther on there is a dramatic example of the work of Nature's destructive forces. Here, a whole mountain top for about a mile has been sliced off and flung to the valley, falling far out into the river, which runs through and over it. Great boulders and blocks of stone, some of them ten feet through and weighing tons, lie flung about as if the mountains had been playing pitch and toss.

140.1 Poboktan Creek, the third of the large tributaries on 45.4

the cast side, flows down to the Sunwapta. Its valley was the route most frequented by the Indians in this part of the mountains. Its main branch leads southeast to the headwaters of the Brazeau River, a wide stream flowing out to the Prairies, while another branch leads north to Maligne Pass and the headwaters of the important Maligne River—main source of the beautiful Maligne Lake—which flows into the Athabaska about 9 miles east of Jasper.

Poboktan is the Stoney Indian word for "owl", and was given to it by Dr. A. P. Coleman, who followed this route in from the plains on his expedition of 1892, on account of the number of large owls which, he said, "blinked at them", near the summit of Poboktan Pass.

In the old days there was an Indian encampment not far from the mouth of the creek where hunting parties frequently rested to skin their furs before starting on the arduous journey back to their Plains' camps. Very often not only the men, but the women and children as well, went with the party, and there is a legend of a sad fatality which occurred near this spot. It is said that while a band of Stonies were encamped there a young brave spied an eagle planing high overhead. To show his skill he drew his bow and let fly an arrow. The bird fell, but on the other side of the river. The people shouted in admiration and the shy eyes of his darkskinned sweetheart gleamed with pride. In his excitement, anxious to secure the eagle feathers from which he could make the prized "war bonnet", the youth plunged into the river without stopping to look for the ford. The people shouted to him to come back, but it was too late. He was caught up beyond his depth and carried downstream. For three days the people sought his body up and down the river below the falls but it was never found. Yet the Indian girl refused to leave and hung above the rim of the canyon declaring that she heard his voice calling to her from the swirling waters. One night she, too, disappeared, and it was believed that she had thrown herself into the chasm hoping to find her lost lover in its dark depths.

On the east side of the valley the separate peaks have disappeared and there is a long, unbroken ridge which Mileage from

Banff

Mileage from Jasper

was called by some weary traveller the "Endless Chain", and, while not endless, it does go on for many miles. On the west a great mountain mass, with no named peaks, extends as far as the angle formed by the junction of the Sunwapta and the Athabaska Rivers.

150.5 Since leaving the Columbia Icefield the road has dropped almost 2,500 feet and the forest now shows a greater luxuriance; and poplars, Balm-of-Gileads, even a few cottonwoods, are seen. Still dropping gently it runs out into the open and reaches the short spur road leading to the Sunwapta Falls, with the Sunwapta Tearoom and Bungalow Camp at the junction of the two roads.

150.5 Sunwapta Falls and Canyons

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From the Cabins a spur road leads a quarter of a mile to the left through the woods to a public campsite opposite the fine falls and upper canyon of the Sunwapta River. For some time the river has been lost to view. Now it re-appears, racing madly between contracting walls, to plunge through a narrow gorge only a few feet wide in a great smother of foam and spray. In the very centre of the cataract stands a dark pillar of rock which has been worn as smooth as the back of a seal. It must have resisted the force of the waters for untold years and looks as if it would stand for countless more. At the foot of the fall the river is brought up against a perpendicular wall, which forces it to make an immediate right-angled turn to the left. In a few feet it turns sharply again and races madly down the valley for a mile, then tumbles in another beautiful rainbowarched cataract into a second gorge before it flows out to join the West Branch of the Athabaska River.

A good trail leads down the valley for about two miles to the junction, and those who can spare the time will find it a delightful walk.

Strangely enough, as it seems, although the Sunwapta is the larger of the two streams which form the headwaters of the historic Athabaska, and has its source in the Athabaska Glacier at the foot of Mt. Athabaska, it is the West Branch which acquired the name. This is

due to the fact that the Indians were familiar with the Sunwapta and had given it that name before its relationship with the Athabaska was known.

From the Motor Campsite at the Upper Falls a trail leads west for 10 miles to the junction of the Athabaska and the Chaba Rivers and thence up the Chaba about 8 miles to the Divide. With its eastern tip just touching the watershed lies beautiful Fortress Lake, "cloistered in loneliness", and almost unknown to the outside world.

Few white men have seen it, but all who have agree that it is one of the most beautiful lakes in the mountains. It was discovered by Dr. A. P. Coleman's party in 1893. They had come down Poboktan Creek to the Sunwapta Falls and thence up the Athabaska and Chaba to the Great Divide, hoping to find the fabled Mts. Brown and Hooker. Disappointed, weary, and discouraged by their failure, they suddenly came upon an unknown lake, which they thought at first might be the famed Committee's Punch Bowl. Dr. Coleman tells the story in his "Canadian Rockies, New and Old Trails":

"Rounding the corner of the great buttress (Fortress Mt.), whose foot we followed, suddenly there opened out below us the most marvellous lake imaginable. We were above the east end, and could see it stretching 8 or 10 miles to the west in a valley completely surrounded by heavy forest, sloping up to purplish cliffs and mountain tops with snow and glaciers. The water was turquoise blue, shading round the edges to green, and a creek entered it from a glacier on the other side, forming a delta and sending out two plumelike currents of milky water that almost reached our shore. Forest, glaciers, and mountains were perfectly reflected in the lake."

No ponies or guides are maintained at the Sunwapta Falls Bungalow Camp, but an expedition to Fortress Lake could be outfitted from the Columbia Icefield Chalet, or an able-bodied hiker could reach it on foot in one day. Mile by Mile

SEVENTH SECTION.

THE GREAT RIVER OF THE WOODS.

DOWN THE ATHABASKA TO JASPER FROM SUNWAPTA FALLS. 35 MILES.



Valley of Crooked Trees

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HE conjunction of the two branches of the Athabaska takes place two miles west of the highway and it is five miles before we meet the combined river now bearing the name "Athabaska".

152.3 **Buck Lake**—200 yards east of the road is Buck Lake, 33.2 which has been stocked with trout and is a good fishing

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spot. Oars for boats and a guide, if desired, may be obtained at the Sunwapta Falls Tea-room.

- 152.7 **Honeymoon Lake,** 300 yards to the east, is also very 32.8 popular with sportsmen. It contains both Dolly Varden and speckled trout.
- 153.5 Looking west up the valley of the Athabaska towards 32 the Divide there is a fine view of the great peaks lining the valley, with Mt. Quincy and the symmetrical head of Catacombs Mountain, both snow-covered, standing out on opposite sides of the river.
- 154 Now the road begins a slow descent to the valley, 31.5 through deep woods of pine, spruce and Douglas fir, succeeded by poplar and the aromatic Balm-of-Gilead. Across the valley, Brussels Peak and Mt. Christie, both over 10,000 feet, lift towering heads into the sky as the road and river meet again.
- 156 **Home of the Winds Mountain**—On the east side of 29.5 the valley rises a great monolith of pinkish rock, banded with old red, which resembles a Tibetan Monastery. A path leads up to a recess which looks like a great front door, and on the summit there is a squat tower like a double chimney.

The peak has no official name, but the Indians, more imaginative than we, regarded it as the home of the winds, particularly of the North Wind, whom they specially feared, because, as they said, "he was so ready to fly into a rage and when he got going he didn't know where to stop."

161.5 Viewpoint

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From the high cliffs overlooking the Athabaska River there is a fine view of the valley and the majestic peaks which line it to the west. The road has made a sharp turn to the west shortly before reaching it, so that from the viewpoint you are looking almost directly south, with lofty Mt. Fryatt and Mt. Christie almost in a line, and Brussels Peak a little farther to the south. Mt. Fryatt and its sister peak across the Whirlpool River, Mt. Edith Cavell, which is only seven feet higher, are the two last eleven-thousand foot peaks of the northern

Rockies with the exception of Mt. Robson (12,972 ft.), the highest point of the whole system, which rises north of the Yellowhead Pass. Both commemorate outstanding figures who lost their lives in the first world war. Capt. Fryatt, commander of H.M.S. "Brussels", was executed in 1916 by the Germans on the charge of having attempted to ram a German submarine. Edith Cavell, nurse and matron in charge of the British hospital in Belgium, was shot for assisting British and Belgian prisoners to escape.

Mt. Fryatt is one of the noblest peaks along the way. It rises from a valley spread with the rich pile of an unbroken forest to a bold frontal tower shaped like a sugar loaf. Behind, it runs out into a long castellated mass thickly crowned with ice.

Although Mt. Christie is almost a thousand feet lower in height, its broad front pyramid, which rises on the summit to a huge tusk of rock hundreds of feet high, is almost equally majestic. Brussels Peak just behind is a worthy associate, and this splendid trio, with the living forest surging up like a green tide at their feet, their bold rock precipices, and rugged heads often lost in the clouds, make up a picture of alpine beauty and grandeur that lingers in the memory like a great musical chord.

Smaller details add themselves to the picture, such as the slender waterfall between the second and third peaks of Mt. Fryatt, which tumbles from a glacier high up near the summit hundreds of feet to the valley; the cirque glacier held in the arms of Mt. Christie; the deep carving of its buttresses and the immense thickness of its icy roof. Below in the grey, heavily silted river, little islands in the making already nourish bright green marsh grass, even a few adventurous jackpines. Immediately below the viewpoint on the sparse shrubs which cling to the cliff your eye may catch sight of little tufts of white wool, perhaps even the tracks of small feet in the soil. The alplands on Mt. Kerkeslin, the fine mountain to the northeast, are a favorite pasture for Rocky Mountain goat, and these hardy mountaineers often come down to drink at the river at this point, leaving telltale evidence behind of their passing.

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For the next four miles the road runs through the 23.5 woods, with the tawny slopes of Mt. Kerkeslin, inlaid with broad bands of a dark red strata, rising all along the east side of the valley. Mt. Kerkeslin is an impressive mountain, gaining in grandeur with each mile, until at the Athabaska Falls it completely dominates the land-scape to the east.

At this point the mountain presents its finest aspect. 20.1 A green forest drapes its lower slopes, and above, like a cyclopean statue stripped to the waist, the splendid torso of the mountain poises itself sharply against the background of blue sky. Broad bands of warm red strata decorate its precipitous face and its summit is carved into towers and flying buttresses. Across the northwest shoulder is flung a shining glacier and a slender waterfall drops like a silver dart to the valley. On the tip of the shoulder facing the river there is a low tower of yellowish rock which is known as Cougar Peak. Seen from Jasper, with the glow of the afternoon sun upon it, it looks like a carved mountain lion, or cougar, a species native to the park.

From the base of Mt. Kerkeslin a trail leads northeast three miles to Horseshoe Lake, home of some fine specimens of Rainbow trout. Hardisty Creek, nearby, is noted for its specially delicious Dolly Vardens.

The highway now makes a turn to the west, crossing the canyon of the Athabaska just below the falls, one of the most beautiful of the many beautiful falls in the park. The historic river, swollen by many tributaries to a width of two hundred yards, comes sweeping round the base of Mt. Kerkeslin to find its channel suddenly blocked and contracted by an outjutting wall of rock. Splitting into three parts, the river flings itself into a deep basin and, turning almost at right angles, boils and churns about, cutting an ever deepening channel through a canyon so narrow that one could almost step across. The central fall, which carries the main body of the river, strikes the opposing rock with such force that columns of spray are sent flying far above the trees, and in the course of ages the swirling waters have worn great potholes and arches in the enclosing walls, which just below the bridge have a depth of over eightv feet.

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Magnificent views meet the eye in all directions. To the west is Mt. Edith Cavell, a mountain which dominates many a beautiful vista from Jasper but which shows a different and unfamiliar face from here, with its summit rising to a symmetrical pyramid and an unsuspected glacier hanging from its eastern shoulder. To the south are Mts. Fryatt and Christie, with Mt. Belanger showing between them. Blued by distance, with white clouds smoking about their heads, they form a majestic and beautiful group.

West of the bridge there is a public campground. From this point a trail leads south to the Geraldine Lakes, which are noted for their unusually large Rainbow trout.

- The road now turns north again, following the west 17.5 side of the Athabaska Valley, with the river now far below. In three miles it passes a green tarn set in the woods a few yards from the road, known as Leach Lake. This, too, is a favorite fishing spot.
- road runs out to the bridge over the Whirlpool River, a clear, boulder-strewn stream, rushing down tumultuously to join the Athabaska. For fifty years this valley, which reaches almost to the Divide, was the route of transcontinental travel. Up and down it went the "Fur Brigades" and the distinguished travellers who went with them. At the Athabaska Pass, beside the little lake known as the "Committee's Punchbowl", camp was made, and goods, supplies, mail and passengers exchanged with the Brigade from the mouth of the Columbia which met them there. After a day or two's rest each Brigade would then turn back, the eastern to Hudson Bay, the western to the Pacific.

The distance from the mouth of the Whirlpool to the summit of the pass is about thirty miles. Near the head of the valley there is a remarkably interesting alpine region, as yet little visited, with extensive icefields and fine, glacier-hung peaks. Though none of the mountains exceed eleven thousand feet, the few alpine climbers who have visited this region report that they offer some of the most interesting climbs in the park.

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Mileage from

Mileage from Jasper

171.5 Valley of Crooked Trees

One mile north of the Whirlpool Bridge the road runs across a narrow, shallow valley-so narrow that you are very apt to pass by without noticing it—where the jackpines seem to have suffered some sinister blight. Trees fifty feet away on either side are straight and normal, but in this small valley every bole is bent, twisted, contorted out of shape. Some have gnarled and knotty elbows as if they had been attacked by some sort of arboreal arthritis. Others are twisted like corkscrews or bulge like the neck of a cormorant which has a half swallowed fish in its throat.

Several explanations have been offered for this peculiar malformation. Some ascribe it to a chemical m the soil, others to a heavy drift of snow falling upon the trees when young. But that given by an old-time mountaineer seems most probable. Years ago, he says, a forest fire probably swept across here, leaving the usual rampikes standing. Two or three years later, when voung seedlings had taken root in the valley, a heavy wind sent the rampikes crashing down upon them. But although crushed, the seedlings did not give up. With the indomitable persistence characteristic of jackpines, they grew around and between the logs, twisting up again towards the sun, though deformed for life.

- In half a mile the Whirlpool joins the Athabaska, now 13.5 172 a broad, swiftly flowing stream, full of dangerous currents and eddies. To the southeast Mt. Kerkeslin stands out prominently, with Mt. Hardisty directly to the north. Beyond them, stretching north towards Jasper, is the long line of the Maligne Range, with Antler Mountain (8,400 ft.) and Curator Mountain (8,604 ft.), now directly opposite, across the valley. The treacherous "Traverse de Trou", or crossing of the deep hole, scene of many a near-fatality in early days, is a little below the mouth of the Whirlpool.
- The road reaches the junction with the nine-mile 8.7 extension road to Mt. Edith Cavell. Mt. Cavell is the Fujiyama of Jasper. Everywhere you go that serene and noble summit dominates the scene. It catches the earliest glow of morning and is the last to fade at night. Its

Mileage from Banff Mileage from Jasner

dazzling head is reflected in the still pools of the Athabaska and the jewel-like waters of Lac Beauvert. It adds beauty and dignity to every moment of the day, a fitting memorial to that brave and compassionate spirit who saw at the last that even "patriotism was not enough", that we are all members one of another in the great human family and that war is the final stupidity of man.

The drive to the mountain is worth taking for its own sake. It runs through the deep forest of the Astoria Valley and from its highest spiral there is outspread a panorama which for breadth and grandeur can hardly be surpassed. The road runs to the very foot of the Angel Glacier, which hangs with extended wings from a deeply scooped cirque basin, and a broad tongue thrust out into the lower valley. To the right is the dark, richly colored mass which forms the north shoulder and which has been called Mt. Sorrow. A mile from its base there is a sombre little lake known as the Lake of Tears.

There is a tea-room at the mountain where lunches and teas may be obtained.

176.9 In a few moments the road crosses the Astoria River, 8.6 another ice-green stream, tumbling over a boulder-strewn bed. The name is derived from the famous fur trading post established by a party sent out by John Jacob Astor at the mouth of the Columbia River in Washington. Franchère Peak, half way up the valley, commemorates Gabriel Franchère, one of the young clerks who accompanied the ill-fated expedition, and who returned two years later across the Athabaska Pass.

The Astoria River was an old trail route to the famous Tonquin Valley and drains from the Amethyst Lakes.

On the east side of the Athabaska was the "Prairie de la Vache", or Buffalo Prairie, which seems to have been at one time a feeding ground for herds of buffalo who had wandered in from the plains. The first white men who came up the Athabaska Valley speak of seeing buffalo tracks and "a number of the bones of that quadruped bleached by time".

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Looking across the valley to the southeast, north of Curator Mountain, can be seen the cleft in the Maligne Range in which lies Shovel Pass (7,500 ft.), one of the highest and most beautiful passes in the park and a trail route to and from the famous Maligne Lake. The pass is also a favorite ski-ing objective in winter.

- 178.7 Portal Creek, another wild little mountain stream, 6. rushes down to the Athabaska. This, too, was a former trail route to the Tonquin Valley, but is now seldom used.
- 179.5 Across the river, set in green meadows, is a small chain of lakes, known as the Wabasso—the Indian word meaning rabbit—Lakes. These have been formed by the damming up of numerous streams by beavers and chiefly notable because they are said to afford some of the best Rainbow trout fishing within easy reach from Jasper.
- 181.4 The road now skirts the green wooded slopes of 4.1 Marmot Mountain and reaches Whistlers Creek. There is a Bungalow Camp here.
- The road runs along the base of Whistlers Mountain 3.5 (8.085 ft.), so-called from the numerous mountain marmots or "whistlers" which live in rocky burrows near the summit and whose call bears a startling resemblance to a small boy's whistle. The peak is approximately the same height as the famous Mt. Parnassus of Greece, home of Apollo and the Muses, and the panorama from its summit is as lovely as any in the Ionian Hills. A well-beaten trail leads to the top and ponies may be taken to within a few hundred yards of the summit.
- 183.8 To the east of the road is the Kiefer's Bungalow $_{1.7}$ Camp.
- 184.7 A spur road branches to the right and crosses the Athabaska to Oldfort Point, site of the trading post built by Wm. Henry, an early trader in the employ of the Northwest Company, and used by them as a depot of supplies. Oldfort Hill, a rocky point rising about 400 feet above the junction of the Miette River and the

MILE BY MILE . . .

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Athabaska, commands a fine view of the valley in both directions.

Now the road runs across the lazily flowing Miette, which takes its rise near the Yellowhead Pass, crosses the tracks of the Canadian National Railways, and enters the town of Jasper, headquarters of Jasper National Park and the terminus of the Banff-Jasper Highway.



The Town of Jasper

The most pressing question for the motorist on reaching journey's end is that of accommodation. In addition to the "Jasper Park Lodge" a luxurious Bungalow hotel operated by the Canadian National Railways on Lac Beauvert three miles from the town—there are three hotels in Jasper itself, but unless reservations have been made in advance, rooms may not be available. The motorist who has not engaged accommodation before arrival is advised to proceed directly to the Government Information Office in the Administration Building near the railway station. Here he will be able to secure complete information with regard to Bungalow and Motor Camps and rooms with approved accommodation in private houses. Maps of the town and park, and folders describing the chief attractions can also be secured here.

Jasper is a divisional point for the Canadian National Railways and has a permanent population of about 1,500 people. Both the townsite and park are administered under regulations established by the National Parks of Canada Act by the Department of Natural Resources. Their administration is in the hands of a resident Superintendent, assisted by an engineering staff and a Fire and Game Warden Service. Members of the well-known Royal Canadian Mounted Police also patrol the town and park and help to maintain law and order. As in the other national parks all land is retained by the Crown, but lots are leased for business or residential purposes at a very reasonable rental. Public services such as telephone, electric power and light, water supply, garbage collection and a number of recreational facilities are provided by the government. The town has wide streets with ample parking room, and possesses a number of good stores. restaurants, banks, garages and service stations, a hospital, several churches, a public and a high school and a moving picture theatre. A landing field for light air-craft, approved by the Department of Transport, is located within a short distance of the townsite.

TOWN OF JASPER . . .

Jasper (alt. 3,472 ft.) is situated just below the confluence of the Miette and Athabaska Rivers in the wide and friendly valley, several miles across, carved out by an ancient glacier. At the close of the Ice Age the valley was occupied by a long lake, in whose bed the Miette River, rushing down from the Yellowhead Pass, deposited great quantities of boulders, gravel, and silt. Gravelly benches left when the lake disappeared line both sides of the valley, and the innumerable boulders, smoothed and rounded by the action of ice and water which are found on every hand, have been utilized in many buildings.

Totem Pole

One of the most interesting things in the town is the tall Totem pole which stands near the Railway Station. This very fine specimen of a native art fast disappearing is of Haida workmanship and was brought from the Queen Charlotte Islands in the Northern Pacific, in 1915. The pole has a length of 65 feet, 9 feet of which are buried in the earth. It is estimated that three years would be required to carve it and that the cost to the family who owned it would be about \$1,200.00. Roughly speaking, such poles are the family coatof-arms, indicating the phratary—or group of families which possess the same supernatural guardian or ancestor—to which the owner belonged. The bird with curved beak—the heraldic sign for the supernatural "Raven"—at the top of the pole shows that this family belonged to the Raven phratary, one of the most important on the Northwest Coast. Beneath is the figure of a man protected by the Raven's wings.

In Haida and Tsimsyan legends the Raven appears as a supernatural being, half bird, half divinity, who found man living in a clam shell and began to develop him into a kind and honorable being. He brought him the gifts of light, fire, food and water and taught him the arts and virtues. Like many primitive divinities he was fond of playing pranks and was so often dishonest that he was known as the "Trickster". Yet, if properly appeared, he would direct the family to good

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hunting and fishing grounds when food grew scarce, or assist them in the subjugation of their enemies.

What to Do at Jasper

Every form of outdoor recreation can be enjoyed at Jasper. There are miles of delightful woodland trails for riding, several stables where ponies can be obtained, and a dozen interesting objectives within the radius of a few miles. There are peaks to be climbed, offering every degree of difficulty from those which can be "walked up", to post-graduate climbs which demand the highest degree of endurance and skill, such as those in the Tonguin and Whirlpool Valleys. There is a championship golf course attached to the Jasper Park Lodge, with a superb setting of peak, forest and lake. There are a dozen lakes and streams, several of which can be reached by car, which afford good trout fishing. There is open air bathing at Lakes Annette and Edith, a heated swimming pool at the Lodge, and curative Hot Springs near the eastern boundary of the park.

There is ski-ing in summer at the Columbia Icefield and Maligne Lake and well organized Hikers' and Tennis Clubs. There is a Government motor campground, equipped with kitchen shelters, electric light, and running water at Patricia Lake, three miles from the town and a tea-room and dance pavilion at Pyramid Lake, a mile farther on.

One of the outstanding features of the Athabaska Valley at Jasper is the number and beauty of its lakes. On the wide gravel benches which line each side of the river there are at least a dozen of them, each with its distinctive coloring, reflecting in their crystalline waters the ever-changing beauty of peak and sky. Only half a mile from Jasper are the Twin Lakes, the first of which is a favorite bathing place. The second, of great depth, is known as the "Bears' Bath Tub" because black bears sometimes resort there for a cooling dip on very hot days.

TOWN OF JASPER . . .

West of Jasper on the north bank of the river there are half-a-dozen little lakes—Mina, Cabin, Hibernia, Marjorie, Caledonia and Dorothy—all of which can be reached on foot or pony back, for the farthest is only seven miles away. Cabin Lake is the source of the town's water supply.

North of the town, reached by motor road, are the lovely sister lakes, Patricia and Pyramid, the second of which is noted not only for its beauty but for its excellent fishing. Across the valley there are six more lakes, each with its special beauty and coloring. Lac Beauvert, on which the Jasper Park Lodge, operated by the Canadian National Railways, is situated, is the most famous, though Lake Edith, three miles farther east, is a close rival in beauty. Thirty-two miles from Jasper is the famous Maligne Lake, considered by many the finest in the Canadian Rockies.

The remarkable Maligne Canyon, the river of the same name which runs partly underground, the curiously-behaving Medicine Lake, the Hot Springs at Pocohontas, and the strangely twisted and contorted ranges near the east gate of the park, are all worth a visit. Along the Divide are the seven great fortress-like peaks known as The Ramparts, while immediately north of the Yellowhead Pass is Mt. Robson, the "Monarch of the Rockies."

Many of these can be reached by motor road; others only by pony-back. Horses, guides, and full information can be obtained at any of the hotels, or at the Government Administration Building.

The origin of the name "Jasper" often arouses curiosity. There are good reasons to believe that it was derived from a certain Jasper Haws, Hawse, or Hawes—all three spellings appear in the old records—who was in charge of the Hudson's Bay Company's post on the Athabaska River at the north end of Brule Lake in the early years of the nineteenth century. He is often confused with Joseph Howse, another agent of the Great Company who was sent after Thompson in 1809 and whose name is perpetuated in Howse Pass. Later Howse went

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to Scotland, where he published a grammar of the Cree language. Hawse came up from Missouri with his Indian wife and several children to undertake trapping independently and later joined the Company and was placed in charge of the Athabaska post. On old maps this appears first as Jasper's House, later as Jasper House, a name which it bore till the buildings rotted away.

Hawse is reported to have had a striking mop of yellow hair and this earned him the nickname of "Yellow-head" or "Tête jaune". After he left the Company he undertook trapping on his own in the neighborhood of the pass and is believed to have had a cache there where he stored his furs and supplies. This would account for both names—Yellowhead Pass and Tête Jaune Cache, B. C. Having thus imprinted his name upon the whole region Hawse, says the legend, yielding to the trapper's eternal wanderlust, started with his family by raft on the hazardous journey down the Fraser and perished with them in one of its treacherous rapids.

Climate

The climate of Jasper Park is temperate and invigorating. The average day temperature during the summer is 65 to 75 degrees. Thunderstorms are rare. There are no snakes and few mosquitoes. The long cool twilights, with the pale afterglow lingering behind the peaks sometimes for hours after the sun is gone, are characteristic of these northern latitudes. So, too, is the ghostly glimmer in the east at midnight, which is known as the "false dawn".

